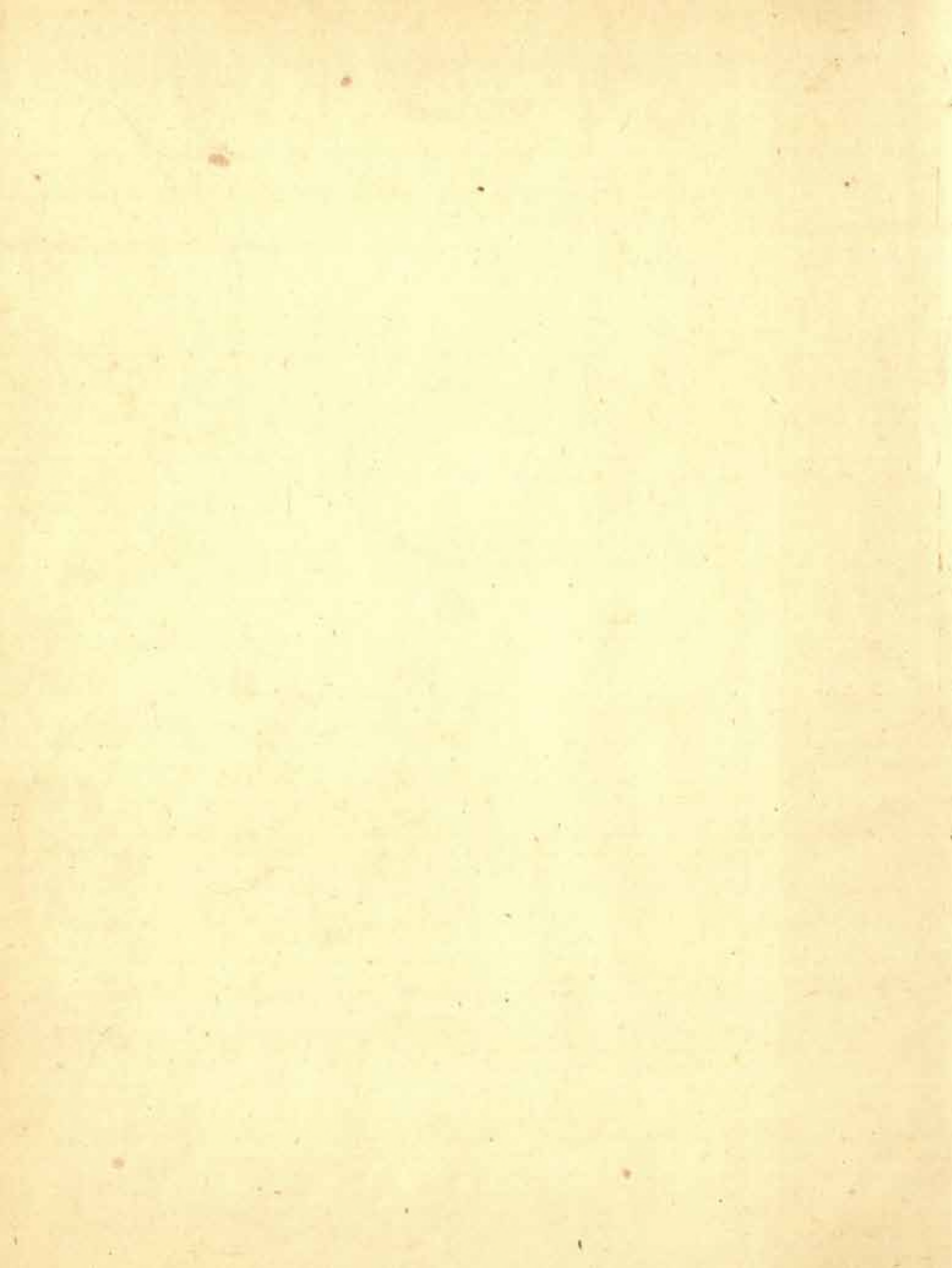


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EIGHTY-EIGHTH SESSION 1921-1922

Inaugural Address

By the PRESIDENT, PAUL WATERHOUSE, M.A., delivered at the General Meeting,
7 November 1921

THE great and good Earl de Grey was, as the *Kalendar* and history will tell you, the first President of the Institute. He was a statesman who in his time played many parts and a man who was so willing to give to our Body the prestige of his name and the help of his personality that he held the presidential office to our great benefit and to his own honour for no less than a quarter of a century.

That is one reason why, gentlemen, though the Institute is 87 years of age, I have only had 27 predecessors in office. The other reason is that though two or sometimes three years have been the normal spell of service, Sir William Tite alone of all the line was persuaded to come back to the chair for a second period of captivity after four years of freedom. But in those days Tite was no longer an architect—he had retired; he retired at about 55 years of age; and his energies outside the Institute were devoted as a Bank Director to Banking, and as a member of Parliament to thwarting the Gothic tendencies of Sir Gilbert Scott.

I do not propose to give here a history of my 27 forerunners. Out of the whole number I have personally known 17, and there is no reason in the nature of chronology why I should not have known by sight several more. In fact, there are architects in our midst, men of still active energy, who were born before the first of our Presidents died. It is perhaps

a curious fact that while my name is the 28th on the list my father's is the 14th.

It is a happy and pleasant thought that out of my 27 predecessors no fewer than 8 are still very much alive, and among them I venture to reckon—if they will allow me to say so—some of my very best friends. Our past Presidents form, though we may not always recognise the fact, a kind of House of Lords in their relationship to the Council. No one but a President, or one who has been closely associated with the duties of this chair, can know what the temporary chief of our brotherhood here owes to the fact that he can lean at times of difficulty on the strong support of those good men and true who have been through the career before him. I give here no hint of dependence. A President must fight his own battles or, if happily there are no battles, must at least steer his own course; but the post is one of a certain isolation, and the sense that there is at hand among a body of tried friends sympathy, counsel and advice, is a boon which no sound President can wisely disregard.

Our procedure affords, to my mind, too little opportunity for the free acknowledgement of certain past services. I want, with your leave, to make such an opportunity for myself by saying a word about one or two friends of mine and of yours whose modesty will resent every word I say.

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No one will ever adequately say or perhaps know how much modern architecture as a profession owes to Sir Aston Webb. His singularly happy personality, welcome in all kinds of society, crowned as it has been by his appointment to the courtly post of President at the Academy, has won for all his colleagues an honour for which we may be always grateful. Sir Ernest George has emphasised as few others before or since the gentleness—I can think of no better or nobler word—of a true artist's life. Thos. Colcutt is a name that has meant to me virility of execution, strength, courage, and, not least, great friendliness. Of Stokes in his day we knew the force and fire. If fire and force have in later years been dimmed by untimely ill-health we must never forget that it was his Atlas back that bore the weight of the new birth of the Architectural Association. I think with pride of the fact that I sat at his (literally) round table in Storey's Gate in the days when he chose to attribute to the collaboration of others the great educational movement of which he himself was perhaps the real mainspring.

I have mixed these metaphors, but they are better for the mixing.

Sir Reginald Blomfield, an old personal friend, has shown, as few modern architects have shown, how the literary and historical career can be successfully linked with the practical and creative. We owe him much for this, for in the first place, he has given the lie to the theory that such a combination is impossible; and secondly, he has done honour to our Institute by the respect in which his written words are so widely held.

Lastly, among living men I come to Ernest Newton and John William Simpson.

We tried at the end of the war to tell Newton on a little script of parchment what we thought of his work as President during the terrible subversion of our civilisation that our world went through. I hope it will always be remembered of Newton that a man whose happiness consists, I believe, in the creation of some of the tenderest and most tranquil of domestic architecture said to himself, "Here is an exceptional and perhaps uncongenial job ready for me to do. It is a call. I will answer it."

Some of us know with what tact and grace, but at the same time with what infinite labour, and I suppose, fatigue, he laid hold of and carried through that heavy undertaking.

John William Simpson has made my own task an extremely difficult one. I was going to say that he

was a born chairman, which indeed he is; but as he can also be described as a born administrator and a born after-dinner speaker as well as a born architect and a born writer of humorous letters, I am in danger of calling up by my language a rather strange portrait of the infant Simpson in his cradle. Let it suffice to say that his rule of the Institute—I don't hesitate to use the word rule—was to my mind a very masterly exhibition of a range of talents which not by any means every good architect possesses. His time was a difficult time, and he surmounted his difficulties, facing odds of ill-health with remarkable pluck, and with a skill which sets his successor one of those examples which though inspiring are also terrifying.

I cannot refrain here from a few personal words. It is difficult for me to tell you, my friends, with what emotion I occupy this chair. I can't pretend to be among strangers. I have been an Institute man all my professional life, and most of you know me in a more or less personal way. Perhaps it is the very fact of my being so entirely at home in this room and among these familiar faces that gives me the sense of anxious responsibility of which I venture to speak. I have felt ever since I came within reach of the chair that others would fill the office better than myself, and I should never under any circumstances have done anything to encourage my chances of getting here unless indeed ordinary work for the Institute can be interpreted as encouraging these chances. But it was the clear wish of some of you that I should be nominated, and being elected I need not disguise from myself or from you the fact that to be your President is an honour which no architect who believes in the brotherhood of Art can despise. I live, as it happens, a life of which the duties are sometimes complicated and numerous. My time-table is at times, like that of all busy and happy men, an outrage on the eight-hours day. But such as I am, I am here to do as far as in me lies the duties you have laid upon me, sure that you will pardon the shortcomings which are certain to reveal themselves. With us every succeeding epoch is by the very march of time more onerous than the past; but I have at least courage, and there is no courage like that of the man who feels sure that he has friends about him.

Among the happy phrases of that most happy writer St. Paul is the expression, "We upon whom the ends of the world are come." Those ends of the world come upon every generation in turn and would be un-

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bearable were it not that the very ends are after all only beginnings. We picture ourselves seated on the very prow of progress with a long wake behind. But the prow is a prow, not a stern: we are cleaving the flashing waters of time, and so far from being at the last extremity of history we should think of ourselves as in mid-voyage, or in a voyage less than half begun. I said that I believed in the brotherhood of architects. I do. I believe not only in the bond that unites all of us as contemporaries, but equally in our joyful bondage to the men of the past. And having got so far, may I say that I believe just as much and just as joyfully in our union with the untold ages of architectural toilers who are to follow. Our duty towards them is amazing in its force.

Some of the aspects of modern architecture are so remarkable that I want, with your leave, to devote the remaining minutes at my disposal to-night to some consideration of them.

We architects are set in the midst of critics: the whole world of intelligent opinion—to say nothing of the world of unintelligent opinion—is perpetually on the watch to offer us warning and advice. For the most part we pay but little heed to the advice or the warning: we go on our way, we take our own course; we have our own courage, and if attacked we sometimes—but rarely—attempt a reply. What are the lines of our defence and what is our bulwark of justification? This is a serious question. It deserves a serious answer. Can we give it?

Let me say at once that the answer is a difficult one to frame. Our confidence is no vain confidence, but on what is it founded?

I venture to think that the very difficulty of our reply is based upon some qualities of architecture which are none the less important because they are obscure. The obscurity is an obscurity inherent in the nature of our art itself. And if it remains an obscurity even to ourselves that is no proof of ignorance, still less of inefficiency, on our part. It is a proof rather of the great depth and height of a mystery which of itself ennoble architecture.

Look at the matter historically and some facts will emerge.

Some of us are old enough to have been fanned in our youth by the later breaths of the Gothic revival. It is easy to say that it broke like dawn with a gleam of sincerity upon a world whose darkness was getting tired of sham and pretence in architecture. Easy to say, but quite untrue. When shall we say that the Gothic revival began? Like most decent architectural

movements (and it *was* a decent one) its beginnings were graduated, but I suppose it would be safe to say, without worrying about sporadic surprises of early days, that it opened in 1825.

The great Gothic manifestation of the moment was St. Luke's, Chelsea. I do not abuse St. Luke's. I admire it (in one of the senses of the word "admire"), but as far as truth and sincerity go I would just as soon have its contemporary, the now destroyed Hanover Chapel by our first Architect President Cockerill.

Of course, my comparison is rather unfair. It would be more just to the Gothic workers if I were to take a later and riper product of their movement. I might come on to the Houses of Parliament, the foundation stone of which was laid in 1839, and set against it Barry's classic work. Enormously as I reverence the Palace of Westminster, a giant's effort which instead of being a giant's failure is a giant's triumph, I cannot feel sure that as architecture it has a truer claim than the works of the same designer in his Roman and Italian moods.

The fact is that the sincerity plea will not on its own carry the Gothic revival into heaven, and if by sincerity we mean common sense it is certain that sincerity is no real criterion of art.

It is true that quite early in the Gothic days people began saying that the Gothic movement was the pathway of truth and that its mission was the extirpation of pretence. The penumbra of Ruskin was heralding Ruskin's approach, but for us to say in these latter days that the battle was won—as far as it was won—because one style was righteousness and the other deceitful sin is to misunderstand not only the nature of Art but in particular the nature of architecture.

The true strength of the Gothic revival lay in the fact that as it went on its way it eventually made architecture unconscious: by which I do not mean ignorant.

Its impetus was that of religion and romance, its strength was not that of the rejection of a supposed false archaeology in favour of a reputed vernacular style. The archaeology of it was its nourishment in two senses, the first being that without search into the facts of the past no modern architect can achieve taste, and the second that what we call archaeology is after all a mere quarrying into the pit whence we were digged.

And this is one of the points I want leave to make to-night. We talk of archaeological study on the

part of an architect as if it were a fumbling among dry bones. It is nothing of the kind, unless indeed it take the form of a plunge into the archives of some alien civilisation with which our race has no blood affinity.

But western Europe is a small place and its history during the Christian era is but a tiny span.

Do we realise any of us that if we were to invite our direct ancestors as far back as the reign of Augustus to an evening party we could get them all into less than a quarter of this room? If each of us were to follow the direct male line, inviting his father's father, his father, and so on, the whole company from the year nought to the year now would only be about sixty persons.

The Renaissance is looked upon as a great revolution, but the men of the Quattrocento were only forty-two generations off the golden age of Rome, and we of to-day have only a score of ancestors between ourselves and that glorious century that saw the building of Salisbury Cathedral.

To-day history or archaeology, or for that matter the simple study of still standing stones, takes the place of the traditions of the mediaeval or pre-mediaeval workshop, and if we are accused of antiquarianism in our study, or of archaism in our practice, let us answer boldly that the trust of a patriot in the past of his race is no freak of archaeology but simply common piety in the Roman sense of the word. It is, in fact, respect for the traditions of our race.

I should like to point here to a product of the Gothic revival—a by-product, it is true—which made not for good but for evil. Up to the first quarter of last century every architect studied the classic rules. With the dawn of the Gothic fervour there came a sense that the old foundations were being loosened, and before men came to realise that the new mediaevalism carried with it as great an obligation to type as the older classicism there broke out a sense—a perfectly reasonable sense—that so long as an architect exercised his taste he couldn't be acting amiss. With that sense came licence, and with licence a display of work, specially in our London streets between, let us say, 1850 and 1875, which while it remains unbroken or unburnt will be a reproach upon our country. I said it was reasonable to let taste be the criterion. It was. But there is no taste without knowledge, and I question if reason is in architecture a qualified judge. I am willing to be misunderstood if I say that there are

realms where reason is not supreme. What is reason? I suppose it is civilisation's substitute for instinct; and without instinct there is no Art.

But time advances. I have entered too big a subject. Rather than leave it with a ragged edge I will ask you to let me express the rest of the train of thought in separate sentences, begging you not to think from their form that I regard them as epigrams or aphorisms.

Archaeology in architecture is not the refuge of exhausted imagination: rather is it the resource of a spirit of art which, seeking rest and finding none, returns home.

The past is the mother's milk of our growth.

The roots of architecture are as important as its branches and are the conditioning causes of its true fruit and flowers.

While good manners are civilisation's device for the smoothing of intercourse between contemporaries, tradition is civilisation's device for the still more important intercourse between the men of old and ourselves, between ourselves and the men to come. Let us never be guilty of a breach in our link between future and past.

If evil communication corrupt good manners, evil manners make corrupt communications.

Finally, a last thought. It seems a far-fetched one, but if you will consider it, it goes to the very heart of the matter.

The most wonderful fact in modern architectural history is not the capture by America of classic architecture but the capture by classic architecture of America.

VOTE OF THANKS TO THE PRESIDENT

LORD SUMNER OF IBSTONE, in proposing a vote of thanks to the President for his address, said: "My lord, ladies and gentlemen,—With your permission, and by the direction of superior authority, I have the pleasure and the honour of proposing a vote of thanks to the President—without his permission—for the address which he has favoured us with. I believe that I owe this privilege to the fact that I have known him for over forty years. There may be in this room, though I hardly think it possible, those who have known him as long. But at any rate, after knowing him all that time, and knowing many who have known him, I am prepared to say I have never known anybody who did not like him. (Applause). And, though I have never heard him address a public audience before, I am further prepared to say I had no idea that he could at the same time charm and instruct a learned and popular audience. There is a further point, interesting to me, and not, pro-

bably, to anyone else; we were both born in the same city, we are citizens of no mean city, the City of Manchester, adorned by two buildings which will, for many ages, celebrate the name of Waterhouse. I did propose to have alluded further to the early years of the President, but two circumstances are against it. One is, that the arrangement of your room suggests to me the more familiar scene of a coroner's inquest; and the other is that the anecdote which I had—a veracious anecdote—I gave away before dinner to Sir Henry Newbolt, and I do not like to take it away from him. If I were like Sir Anthony Hawkins, who, as we have heard to-night, has charmed thousands of readers for dozens of years, I should endeavour to invent an anecdote, but I fear that I might be found out. I have been supposing that, in addition to the pleasure of meeting countless geniuses—De L'Ormes and Inigo Joneses of the future—I should learn something of the art of architecture. I have attended with the greatest interest to the President's address, which appeared to me to range over most subjects of literature and many subjects of art; I heard disrespectful allusions to Sir Gilbert Scott, and a somewhat patronising approval of St. Paul, a definition of reason without any reference to Relativity, and a reference to the late Mr. Ruskin, that gifted amateur, which tempts me to tell you what I also think about architecture. But I heard less about architecture than I expected; it was only towards the end of the address that I heard an allusion to the Ionic column, and I then hoped I was beginning to get on to serious ground, but a series of glittering epigrams concluded the address.

"I have so nearly exhausted the time which, I think, must have been allowed me, and I am sure I am so nearly on the point of having exhausted your patience, that I am driven to take refuge in being serious. And I would like to make an appeal to the Royal Institute of British Architects during this Golden Period of the presidency of Mr. Waterhouse, to do something for the education of people like myself, who would fain believe that under more favourable auspices they might have been architects too, but find themselves occupying no better position than that of atoms in that large nucleus, that large nebula indeed, to which architecture owes a great deal, and that is the body of clients. Among the many milestones of earlier years I remember two books which I read omnivorously, and which produced a profound impression on me—I daresay neither is remembered now. One was called *The English Gentleman's House*, by a man whose name was, I think, Kerr, at any rate it was a Scotch name. It is a most fascinating book for a boy, from which I learned much, and which made me interested in houses like Blenheim and Mentmore, and I perceived that architecture, as depicted by Kerr, was a very great art. The other was Eastlake's *History of the Gothic Revival*. Since then, I am afraid, I have

got over the Gothic Revival. I have been to see most of the buildings in London that Eastlake figured in his book, and found them not as good as I thought they were. But those two books (probably very elementary things) I can testify did a great deal for me in giving me a profound interest in, I might almost say a profound passion, though an unsatisfied passion for, the great masters of architecture. Is it not possible for you to do something to educate the general public? Here we are, walking about the streets of a great city, sometimes one city, sometimes another; we go to Paris, we go to Rome, and we wander about the Italian cities—we have even been to German cities, but we try to live it down, and all the time we are seeing, at every moment of our walk, buildings which are worthy of our intelligent and critical attention. About nine-tenths of them ought not to exist; but if we can make up our minds why they ought not to exist, we have learned something. Still, there is a large number of all ages and styles which are the work of great men, which exhibit great qualities, and which, if one will pay attention to them, increase one's knowledge as one goes about. One visits picture-galleries now and then, but one is seeing buildings all the time. How is it that the great bulk of English mankind knows and cares nothing whatever about architecture? And it is of great importance, because any one of us might be First Commissioner of Public Works. In some cases the incumbent of that office is a person of whom we are justly proud. I would urge upon any First Commissioner, even upon one of whom we are most proud, to chasten himself by remembering that the office was once held by Mr. Ayrton, and architects should remember that any one of us may be chairman of some association, county council, or board of guardians, who require a suitable building to be erected for a particular purpose, and therefore should have some architectural taste. Can nothing be done to educate our taste? Can nothing be done to make the ordinary man, whose eye only requires educating, appreciate that, apart altogether from the moral side of architecture, that apart from archaeology and styles, there is the greatest possible satisfaction to those who have to live among buildings in great cities if only their eyes can be educated to appreciate the value and importance of mass, of proportion, of light and shade, even of colour, of an interesting sky-line, the relation of buildings to their surroundings, and so forth, to get rid of the idea that as soon as you have erected a set of fine buildings, the next thing to be done is to plant a row of plane trees in front of them, so that as little as possible can be seen of the buildings; or, if it is in the country, after your building is completed, to plant ivy all about it, to conceal it from the prying eye?

"I do not know how the intelligence of the public is going to be reached. You may answer that perhaps it is first to be discovered. But we live in a democratic age.

No art which is obliged to express itself in great and costly buildings can thrive unless it educates its—I will not say its masters, but its pay-masters; and I would like to utilise this opportunity—I always like to utilise opportunities—by making this appeal to Mr. Waterhouse and this Institute, to do more than at present to teach the average stupid man, who is not a fool after all, how much delight there is in even small and well-proportioned buildings, and how much advantage in London can be obtained by destroying bad buildings right and left, so that good ones may be seen, and how much richer life would be, if the Presidents of the great Arts—of which I think there is none second to Architecture—were among our guides and leaders."

SIR HENRY NEWBOLT: My lords, ladies and gentlemen, it is with the greatest possible pleasure that I take the opportunity of seconding any vote of thanks to my old friend Mr. Waterhouse. At the same time, it cannot be denied that my predecessor has made the task as difficult as he could. It would be one thing to propose a vote of thanks to an extraordinarily practised and well-balanced speaker who manages to combine solid substance, pungent wit and delicate urbanity—the three great qualities of a speaker like Mr. Waterhouse—because one could say something about it; but Lord Sumner, first of all by that natural wit of which he is a master, and which makes him a difficult man to follow, and, secondly, by the tangle of mystifications and inaccuracies with which he has strewn his speech, has made it very difficult to pass through the same gap in the hedge after him. I will touch upon one or two of these.

I heard, to my astonishment, the remark that there were probably no persons present in this room who had known Mr. Waterhouse as long as Lord Sumner had, yet in the next breath he was mentioning Sir Anthony Hawkins, Dr. Mackail and myself. We all three of us were at Oxford at the same time as Lord Sumner and Mr. Waterhouse; and if I may press the matter still further I would remark that the first occasion on which I saw Lord Sumner was when he was walking, one afternoon, on the towing-path, and someone remarked to me, "That is the next President of the Union," and immediately afterwards I saw the Balliol Eight go by with Mr. Waterhouse as coxswain coaching it. I pass by the remainder of the inaccuracies. But there was one wire entanglement thrown in my way, which I must get rid of. The anecdote presented to me by Lord Sumner was one for which he had no further use himself, I think, so he passed it on to me, and left me to do what I liked with it. But he is really dying to tell it to anybody who would like to hear it, and I can only say, on his behalf, that if there is anybody in this room who wishes to hear the true story of the Balliol barge, he has only to send a postcard to Lord Sumner to-morrow and he will receive a typewritten copy of the story from beginning to end.

I will forgive Lord Sumner for his wit, his inaccura-

cies and his obstacles, because I want to speak more seriously of Mr. Waterhouse. I have followed with great attention the extremely condensed and difficult discourse which he delivered to-night. It was difficult not only because it was condensed, but also because it was interspersed with amusing anecdotes, which diverted one from the thread of the argument, and so the thread was not very easy to follow. But it left upon me the impression that he had two great points to make, and that he made them both. The first was the point about the brotherhood of the arts, the second was the point about time and style. Those are two matters which interest me very much indeed. I need not be ashamed, as he has already let you into the secret, to speak of myself to-night as being here in the capacity of a poet. It is not a word I should naturally have applied to myself—who would? But as the secret has been told you, I will confess to it. As a poet, I have a special interest in architecture, and in the two points Mr. Waterhouse made. There is no mere slight or superficial resemblance between poetry and architecture. They both fulfil the same function in human life; they both can take material from the common earth, material which is concerned with the uses of everyday life, and both can, by creation, transform it into something new, something of an entirely different kind. They have this in common, that they keep very closely indeed both to the material and the nature of human life. Lord Sumner has already alluded to one of the ways in which this is true of architecture. It has been said—or at any rate it will very shortly have been said—that the whole career of the typical successful Englishman may be expressed in architectural terms. During the first part of his life he is the "architect of his own fortune"; during the second part of his life, if he has bad luck, he is the fortune of his own architect. That, apparently, has happened to Lord Sumner. It is only one among many examples I could give you of the close resemblance there is between poetry and architecture. But there is this great difference: that the reward of the two is very different. If you want to have your common daily life transmuted for you by a poet, you can have it done, and at an exceedingly cheap rate. The King himself—who, I believe, has it done as well as it can be done—pays no more than £150 a year for it, something like £3 a week. I do not believe there is in this room, or even among the acquaintance of anyone in this room, a single architect of reputation who will work exclusively for any man for £3 a week. It will cost you more than that if you want ordinary bricks transformed into a house such as you would care to live in. But if you were to give up architecture from that point of view, it would be a great mistake to give it up from another. When I was young, it was considered to be, I will not say a part of every one's education, but it was a taste which was common to almost all persons of education, to understand, to care

about, to differentiate and to find out about the architecture which has at different times obtained in these islands. I do not notice that tendency among the young of the present day. If I offer them, when they come to stay with me, the run of my books, I notice that the shelf on which my quite respectable collection of architectural works stands is totally neglected. If I take them out to see the sights of the neighbourhood, which consist, as in any other part of England, of castles and a cathedral and old manor houses, they look at them with a rather knowing air, and pitch upon their inconveniences, and their general out-of-dateness. They do not admire the style, they do not know where it comes from, they do not even know the name for it. That is, I think, a serious loss. It happened to me, not long ago—it has happened to me continuously during the last two and a half years—to be considering the education of this country so far as it is concerned with teaching English, and a witness who wanted to embarrass me asked me, in a tone of suppressed indignation, what I thought of a Tripos paper in the English school at Cambridge, which seemed to expect a knowledge of architecture and other social conditions in England during a century when poetry was being produced; and he was astonished, when I entirely approved of such a paper and such questions. I need not be afraid of confessing, before this audience, that it appears to me that a knowledge of architecture is, or should be, part of the equipment of every educated person in this country.

And that brings me to the point concerning the brotherhood of art. I am prepared not only to endorse everything your President said about that, but to go two steps further. I think nothing binds men more than a community of that pleasure which they draw from the arts. I believe that it is more possible for a poet or a painter or a musician to sympathise with architecture than it is for him to sympathise with the butcher, the baker or the candlestick maker. And I think it will always be so. And it follows logically that if we wish, as we do wish, to be one homogeneous nation, the best thing we can do is to spread a knowledge of, a belief in, and a taste for the arts. And there is no art with which we could make a better beginning than the art of architecture, for it is one which appeals on many sides simultaneously. It is almost impossible to imagine even a Briton being so dense, so taken up with trivial affairs, that he does not know one building from another.

The second step I would take is this: We are trying to reconstruct a broken world. We have hitherto held it together by a balance of forces, forces united in one direction against those forces brought to bear upon us from another. The system is believed to have proved itself to be a rotten one; we are looking about for a fresh kind of cement. We cannot find that, surely, either in militarism or in commerce, which is itself a kind of war, or in religion, which, again, divides men into two and

seventy warring sects. There is no known common factor between men, I think, of a binding nature, except a love of the arts. It is possible that amongst those, architecture may be proved to be one of the greatest for this purpose. It is possible for every nation to have its own architecture and yet to admire that of every other nation, and to share with them all the enthusiasm for the most primeval of all arts. During the late war there was no episode which so united the whole of Christendom in indignation as the outraged feeling caused by the destruction of the Cathedral of Rheims. It is conceivable, of course, that an honest hard-headed soldier may have felt honestly convinced that the destruction of that cathedral was necessary for military purposes. I do not believe it, of course, but for the sake of charity, I will take it so. But what was far more significant was that a Prussian of a very well known, a noble, family who had himself attained to the rank of General in the Army, defended, in an article applauded all over Germany, the destruction of that Cathedral, because any act which tended to discourage or discomfort the enemies of his country was a right act, a moral act, a brave act. "And," he concluded, "when the French have submitted to us, we will build them a far better cathedral in the modern German style." I do not think—and I say it with all sobriety—I do not think that even the savage feelings that decided on the sinking of the *Lusitania* really touched a moral depth so profound as that last remark; it touches the very bottom of bad art, and it is, in a sense, as bad as anything in human nature.

The second of Mr. Waterhouse's points was concerned with time and style; and here even the very humblest of poets cannot but be grateful to him. I have spent ten or fifteen years past in speculations on the nature of time, and also the nature of style; and Mr. Waterhouse's remarks are so singularly like some of the conclusions to which I came, that I find myself wondering, in the terms of the old problem as to which came first, the hen or the egg, whether I was really the hen, and whether one or two of Mr. Waterhouse's remarks were not eggs which he, so to speak, stole from my sitting, or whether he was the hen and I had been borrowing eggs from underneath him. It does not very much matter; the eggs are there, and I am sure they are very prolific ones. If we try, as I have often tried, to rid ourselves of ideas of space and time, we shall, I think, come to certain conclusions which bear very closely on matters of art. We shall think, as my late friend Andrew Lang was fond of saying, we shall think of ourselves in a future state when we are delivered from this necessity of placing ourselves somewhere in the time series or of defining ourselves by some kind of spatial framework, as looking upon the whole Universe, of all ages, as a kind of picture book of the Universe. In that picture book we shall see that, as Mr. Waterhouse said, there is no

such thing as a difference between generations ; we shall see as our contemporaries not only all the architects and poets in the past, but those of the future to the end of time, and see everything that was beautiful in its universal and not in its particular form. And this is very important, because when you have to judge of your own work, or other people's, when you have to consider whether it is really a blow for freedom which you are striking, or whether it is only an insane desire for eccentricity which you are gratifying, you have this to go by. Picture to yourself the process of architecture in the ages, and see that it all proceeds from one set of general ideas, general principles to which every great building which has ever been built, fundamentally and in its proper Order, belongs. In the same way, every great utterance of poets, in whatever language, has always belonged to the same realm of art. Now look at the modern building, or the modern poem which professes to have escaped, or to have delivered itself from all restrictions of style, all tradition. Is it really a descendant of that which has gone before, however different ? Or is it, however taking for the moment, however satisfying to its creator, something which is totally, wilfully, unrelated ? If it is wilfully unrelated, it is impossible that it should have any real existence in the picture book, which contains nothing but universals. The result will be that the eccentric will necessarily be wiped out ; there will be nothing left of him, he will be found to have been merely occupying the time of his contemporaries with what is purely irrelevant. This may, or may not, be, to you a pressing question. I gather from the President's remarks that, in some ways, it is. It certainly is in the matter of poetry. I have, for twenty years, been preaching that every poet should be allowed to express himself in the manner natural to him, because only in that way can he achieve the sincerity of style which alone can produce great work. But a certain number of people seem bent upon creating something which is not the expression of anything but a desire for sensation ; it has neither reason nor instinct. I am as certain that it will cease to exist as I am certain that buildings put up in the City between 1850 and 1875, which Mr. Waterhouse mentioned to-night, will eventually be blown down or burned, either by someone here or by those we shall inspire to do what we do not like to do ourselves. They will go. I am extremely grateful to Mr. Waterhouse for having said one more word which will help them to go. I believe, with him, that there is a simultaneity, a timelessness, in all art, and that only that which has timelessness can endure.

I offer my congratulations to you and your President, and ask you to thank him for his address.

The vote was put by Mr. Keen, and carried by acclamation.

THE PRESIDENT : My lords and gentlemen, I

thank you very heartily for the kind way in which you have received my address. I cannot honestly say I regret having given it, because it led to the two excellent discourses which followed it, by my two friends Lord Sumner and Sir Henry Newbolt.

Civic Survey Diagrams

It may interest members of the Institute to know that during the last three months the Civic Survey Diagrams which were prepared during the war have found their final destination. It will be remembered that the schemes were organised in three areas, distributed as follows :—Greater London, South-East Lancashire and South Yorkshire. The London County Council were offered, and have accepted, the Diagrams of Greater London, but the Council were not able to consent to the suggestion of the Civic Survey Joint Committee that the information which the diagrams convey should be kept up to date, stating that "the Council does not see its way, in present conditions, to give any undertaking to complete or continue the work." The Council agree to the condition that the diagrams "shall be available for inspection by the officials of any Government Department or Local Authority to whom they be of interest," and "that facilities for consulting the diagrams shall be afforded to any member of the Royal Institute of British Architects." A complete catalogued schedule of the diagrams has also been sent to the Council. The diagrams of the South Yorkshire area are now in the possession of the City Corporation of Leeds, and the South Lancashire diagrams deposited with the Manchester and District Joint Town Planning Advisory Committee, who passed the following resolution :— "That the very best thanks of this Committee be given to the various associations responsible for the preparation of the Civic Survey of South-East Lancashire for their very valuable gift to this Committee of the plans, diagrams and reports of such survey."

THE PRINCE of WALES AND THE INSTITUTE.

The diploma of Honorary Fellowship has just been presented to His Royal Highness the Prince of Wales at St. James's Palace. The document is beautifully engrossed on parchment by Mr. Graily Hewitt, and the seal of the Royal Institute is attached to the document.

SESSIONAL PAPERS.

At the next Sessional Meeting of the Institute, on the 21st November, Mr. G. H. Widdows will read a paper on "School Design."

Members are requested to note that Mr. T. E. Colcutt (Past President) will read a paper at the Meeting on the 19th December on "Modern Methods of Architectural Education."

Byzantine Architecture and the Work of the Byzantine Research and Publication Fund

WITH SPECIAL REFERENCE TO THE CHURCH OF OUR LADY OF THE HUNDRED GATES IN PAROS

THE work of the Byzantine Research and Publication Fund deserves to be widely known. Its Committee has produced material which in selection and manner of presentation is wholly admirable. Beginning in 1910 with the Church of the Nativity at Bethlehem, by Messrs. Harvey, Lethaby, Dalton, Cruso, and Dr. Headlam,* the Fund produced in 1912 the Church of Santa Eirene at Constantinople, by Mr. W. S. George, Dr. Van Millingen, and Mr. A. M. Woodward.† Its latest publication is the Church of Our Lady of the Hundred Gates in Paros, by Messrs. H. H. Jewell and F. W. Hasluck.‡ The two great churches first published are type structures of world interest. The church at Bethlehem is perhaps the central basilican building of the whole Byzantine achievement: Santa Eirene is a two-domed basilica, which had a far-reaching influence on later architecture in the West, echoed in St. Anthony at Padua and in our own Westminster Cathedral.

The church at Paros has been marked down by English scholars and architects for many years. More than one Director of the British School at Athens has had his eye on it since 1900, but the honour of its publication has now fallen to the Byzantine Fund. Mr. R. W. S. Weir, the authors, and the Fund generally deserve sincere congratulations on the fact.

The church has exceptional interest for an island one, both for its considerable size and for its sixth-century date. The great output of Byzantine churches in Greek lands came in the eleventh century, and there are very few that can claim the privilege of belonging to the great Justinianine period. At Paros,§ as at St. Titus at Gortyna in Crete,|| we find simplicity and largeness of planning, if at the sacrifice of the security of handling and greater complication in arrangement of the

later churches outside of Constantinople. There are certain conditions that are common to the two early island churches. Both are markedly cruciform but only approximate to the true Greek cross form; both are probably sixth century*; both are probably unique, and in this respect the Cretan church, though unfortunately only a ruin, may be the more remarkable of the two. The lateral hemicycles in its sanctuary and the stone technique of its structure are unusual in Byzantine work.

The general impression of the Paros plan is striking. It is a fine example of a cruciform arrangement, but closer examination shows some curiously loose elements, resulting from the fact that the enclosing walls have no real connection with the structural lines of the church proper, an unusual arrangement in a church of this importance. It is true that the general proportions recall St. Mark's, Venice, as Mr. Jewell mentions in his very interesting statement on the dating of the church; but St. Mark's is a much more organically constructed plan than Paros: pier reads to wall throughout, and there is no looseness in its compactly built framework; almost invariably, Byzantine churches of any type show a similar compactness.

Speaking without personal knowledge of the actual evidence of the structure, and with all deference to Mr. Jewell, it does not appear to the writer that there is the germ of a preconceived basilican plan in the Paros church. The whole arrangement seems to show a deliberate intention to build the church as a cross, using the south and west sides of the old church as a starting point. This intention is fully recognised by Mr. Jewell, in dealing with the facts of the structure. The greater parts of both the narthex and the south wall of the Old Church are incorporated in the Great Church. By thus getting a starting point for the *Bema* (sanctuary) of the latter, the position of the north-eastern pier of its crossing inevitably followed. The desirability of full communication between the two churches explains the north transept of the great church and sets the cruciform type of plan completely. The general loose-

* B. T. Batsford, 35s. net.

† Oxford University Press, £2 2s. net.

‡ Macmillan and Co., Ltd., 1920, 50s. net.

The Fund is also responsible for papers on the churches of Western Mani (Ramsay Traquair, Annual B.S.A. 1908-9), and on Italian Armour from Chalcis (C. Ffoulkes and R. Traquair, *Archæologia*, 1911).

§ See plan, Fig. 1.

|| See sketch plan, Fig. 2. From a survey by the writer.

* Not, however, if we accept Dr. Freshfield's theory, quoted by Mr. Hasluck, that the three-apsed plan is never found so early as the sixth century; but St. Titus is not, strictly speaking, triapsidal.

ness of structure in the planning might be accounted for by inexperience, and the superficial acquaintance of the island builders with the great type plans, which led, nevertheless, to some very interesting minor developments.

The *Diaconicon* is on generally typical early Byzantine lines, and the southern piers of the south transept more or less follow through from it.

The ambulatory round these piers (to conform with a similar arrangement in the north transept conditioned by the position of the Old Church) is in itself a marked departure from the basilican arrangement, and this departure is still further emphasised in the aisles of the nave. The external walls of these aisles are quite unrelated to the structural lines of the transepts and eastern portion. The narthex—a remarkably fine feature at Paros—follows the nave.

The systems of columns carrying arcades and galleries, in their relation to the greater elements of the structure, assist very largely the final impression of consistency and orderliness, while stamping the plan as sixth-century work. The vistas in the nave aisles, looking east, are very cleverly worked out.

There has been a considerable amount of later building. Piers and walls were strengthened and new piers added in the fifteenth and sixteenth centuries. This is not surprising, as the plan was originally on the slight side; and the additions, though interfering with the original intention, may be welcomed as preserving the structure.

The accessories at Paros are precious and rare. The *Iconostasis* (chancel screen) has indeed many late elements, but the ciborium is, as stated, unique in Greece. In the ciborium and the tiers of seats in the apse we see the prototypes of later Italian work of the kind.

The system of galleries was very perfect and complete. On great feast days, such a church as this with its galleries crowded with women, must have presented a remarkable sight. The incense, the elaborate vestments and repetitive intoning of the ecclesiastics, would assist in conveying the *semi-Eastern* impression which is the keynote of the Orthodox Church and of Byzantine architecture. In it we find the real bridge between East and West.

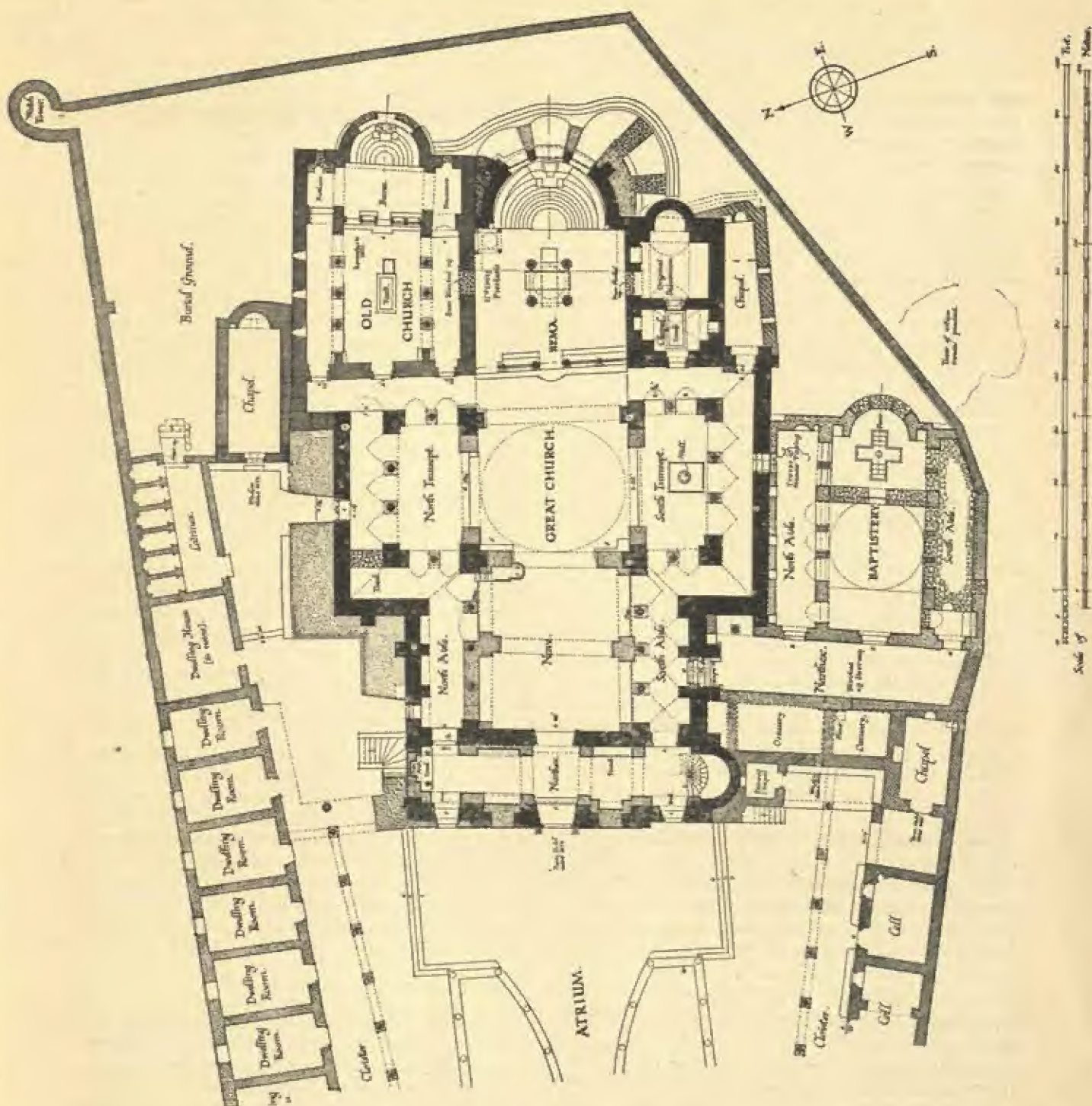
The Old Church at Paros, ascribed to the fifth century, has already been mentioned. It fits snugly into the north-eastern corner of the Great Church. The whole central group of buildings consists of the two churches and the Baptistery, also of sixth-

century date, which is built on to the south transept of the Great Church. Both the Old Church and the Baptistery are basilican (the Baptistery being a true domed basilica), with apses facing east. A direct door from the south transept of the Great Church to the Baptistery was cut through in the fifteenth century, doubtless for quick communication between the well and the font.

The churches were surrounded by an enclosure of later date containing a large atrium and sunk gardens on the west and a burial ground on the north-east. Built round the inside of the three western walls are two tiers of cells and dwelling rooms, which must have accommodated a large and important community. These rooms are separated from the gardens by a cloister with a gallery over. All of these constructions date from the fifteenth, sixteenth and seventeenth centuries.

The elevations of the Great Church show considerable accretions in fifteenth and sixteenth century times. All the main thrust abutments, except where secured by Baptistery and Old Church, were strengthened. These factors, being mostly low down, do not detract from the general character of the elevations, except at the west end. The east and south walls, except the buttresses of the great apse, are generally as in the sixth century, but the pointed form of the dome is work of a later date. As in the majority of Byzantine buildings, there is little exterior appeal except that of direct structure, again of a semi-Eastern kind; but it must be borne in mind that the ground at the east end is now some 14 feet above the nave floor, so that the original impression must have gained greatly by the additional height. Internally, the vistas must have been surprisingly beautiful before the later piers were built. In architectural detail, the arcades of the transepts of the Great Church and the font and narthex details of the Baptistery are of most interest. The very pronounced Greek detail of the central door to the narthex of the Baptistery is notable. The details generally, though not very remarkable, are suggestive and interesting.

The presentment of the material is generally satisfactory and does great credit to the authors. Many of Mr. Jewell's drawings are models of their kind, and all the small-scale renderings are sufficiently illustrative of the characteristics of the buildings. The isometric view of the churches on their original state is a particularly valuable drawing. We see, of course, in this drawing, and in many others, the



PLAN OF THE TWO CHURCHES.

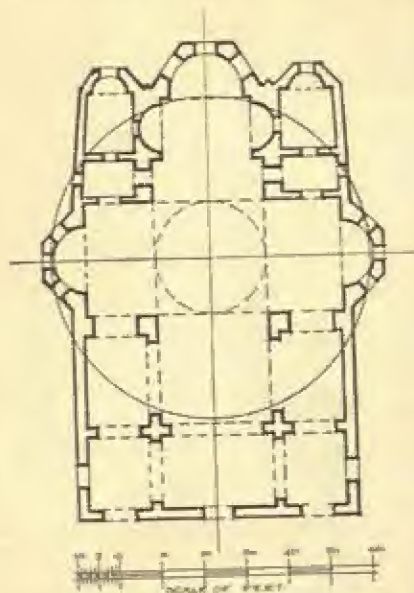
Reproduced by permission of the Byzantine Research Fund.

influence of the pioneer, the great Schultz and Barnsley book on St. Luke at Suris.*

The Committee of the Fund were fortunate in securing the incisive scholarship of the late Mr. F. W. Hasluck for the preliminary historical account. This is marked by the wide range of learning and real knowledge of the East which makes his loss, at a comparatively early age, so great. Mr. Hasluck also contributed the account of the inscriptions and added several valuable notes in the architectural description. Mr. Jewell's treatment of this is a closely reasoned and useful piece of research; indeed, the reasoning is so close that the illustrations

effects are gained as usual by domical forms, but the trabeated character of all accessory work is so strongly marked that the total result is a stationary quality which is quite different from the ideal that lies behind the later mediæval architecture of the West; as can be seen most clearly at Paros in the isometric view of Plate 9. It is perhaps this fusion of the Classic Greek spirit with large and simple domical forms which gives Byzantine architecture its most distinctive characteristic. There is so much in it, after all, that a Classic Greek would have done, that Greeks in fact must have done, and did; but the final impression is semi-Eastern nevertheless, just as Roman Syria, in a different way, is semi-Eastern. To the moderns of the west, Byzantine stands as the great transitional style which is inseparably associated with the Christianity of the Orthodox Church.

THEODORE FYFE.



CHURCH OF ST. TITUS AT GORTYNA, CRETE.
Ground Plan.

do not in all cases bear out the descriptions. Thus, the two sections in Fig. 11 and the mouldings on Plate 14 are not fully explanatory, while some of the details in Fig. 13 might have been rendered to a larger scale. There appears to be no mention in the letterpress of the north aisle windows on the ground plan of the Small (Old) Church. These, however, are not very serious flaws in what is undoubtedly, on the whole, an exceptionally fine publication of a piece of architectural research.

The Paros church confirms an important aspect of structure which lies at the root of all true Byzantine architecture—the value of the beam. Spatial

The President having nominated me to represent the Institute at a Conference which has been recently held to consider whether it is desirable that the British Engineering Standards Association should prepare a British Standard Specification for "Iron Portland Cement," and having attended the Conference and heard various opinions from persons who have devoted much valuable time to the consideration of this material, I write this note in the hope that it may be of interest to some of our members who are users of Portland cement, and who have not had the particular material under consideration brought before them.

Not being an "expert" in Portland cement, my remarks must necessarily be of a general character, and I can only deal with the subject from an architect's or perhaps—should I say?—layman's point of view.

We all know that "Portland cement" is a mixture of lime and clay burnt and ground, the mixture varying in proportions which depend on the constituents, and then treated in various ways—the result being a material of a grey colour, fine, heavy, and of considerable strength.

It was not, as far as I know, originally made at Portland, so perhaps the name may be a fancy one, but it is generally—perhaps all over the world—taken to mean one of the common materials used in building and engineering works, and its use has considerably increased, due to the advent of "reinforced concrete." Its cost has also increased. With this I think most people will agree, and so we leave our old and trusted friend.

The new material "Iron Portland cement" is, I imagine, of German origin, and, as far as I understand it, is a true Portland cement with a certain amount of

* Macmillan and Co.

blast furnace slag added—the proportion of the latter not exceeding 30 per cent. It is claimed that the resultant material is quite as good as "Portland" cement, and as blast furnace slag is at present a waste product, the so-called iron Portland cement should be cheaper, which is very much to be desired in these days when the high cost of all building material is against work being carried out.

To the chemist, and Portland cement expert, must be left the work of protecting the user from an inferior and unreliable building material, and to them the ways and means of how this is to be accomplished may safely be left, as between them the manufacture of Portland cement has been brought to such perfection that little more can be desired.

To me the name "Iron Portland cement" is an unfortunate one, and it is to be hoped that the committee which, it is understood, will ultimately be set up as a result of this Conference to deal with the matter will find some term more suitable for the new material.

I use the term "new material" as it is new to me, but it has, I understand, been manufactured and used in Scotland for some years with very satisfactory results.

My main object in writing to the JOURNAL is to ask members of the R.I.B.A. who have used "Iron Portland cement" to give their experience in the JOURNAL for the benefit of those members who are not so well informed; only in this way can information be distributed for the benefit of all concerned.

The following is a definition of Iron Portland cement by an expert authority:—

"'Iron Portland cement' is an intimate mixture of finely ground limestone and basic blast furnace slag made into Portland cement, and granulated blast furnace slag, the mixture containing not less than 70 per cent. of the former, and not more than 30 per cent. of the latter."

In conclusion, I think the Editor will welcome contributions on the subject, it being of interest on the technical side of building, concerning which we find so little in our JOURNAL.

MAX CLARKE [F].

BRITISH SCHOOL AT ATHENS.

The British School at Athens have just published the Report of their last session (1920-1921). It is a matter of regret that in consequence of the serious financial position of the school at the opening of the session the Committee were compelled to suspend the publication of the Annual. The School, however, was able to continue excavations at Mycenæ and Ritsona, and Mr. Casson conducted a trial excavation at Chauchitsa in Macedonia with funds provided by the British Association. During the next session it is proposed to continue the work at Mycenæ.

Reviews

THE SOCIETY FOR THE PROTECTION OF ANCIENT BUILDINGS.

The 1921 Report of the Society for the Protection of Ancient Buildings appears at an opportune moment and as an attractive variation upon the ordinary record of current architectural events. Indeed the delightful interest of its contents gives to the reading of the report, in these times of depression, the suggestion of a tone-poem rendered in tasteful orchestration by a band of skilled musicians.

Following the unfailing statement of the Morris argument, the listener is led through a thoughtful introduction to the general subject matter. But the key is set by a charming speech delivered by Miss Lena Ashwell at the Annual Meeting of the Society. The theme developed by this accomplished lady serves to remind us of the national heritage of our ancient buildings, and of the necessity to preserve them.

One listens with rapt attention to the melodious recital of the past year's achievements of the Society. This comprises a long story of harmonious effort, not limited to the upkeep of ecclesiastical structures, but embracing houses, market halls, cottages, and the like, the effect of which is to secure the traditional preservation of works representative of all phases of English life. The theme, however, is not destined to proceed upon the usual lines identified with the Society's history, for we are met by a sudden experiment in orchestration—the desire to assume unfamiliar flexibility in its established principles. Here, on pages 17, 33 and 34, the report actually condones the evils of wholesale repair. While still exploring "restoration," we are asked to be tolerant in regarding the practice of undertaking repairs which are not necessary at the moment, but which may be anticipated and executed because of the existence of expensive scaffolding. This is dangerous advice and liable to lead to extravagances against which the Society has fought since its inception.

The report then proceeds to the extreme bending moment in approving the operations of the Office of Works in its reparation of ancient structures. The Committee is well aware of the actual details of that Department's repairs at Rievaulx Abbey, yet utters no note of warning on the use of ferro-concrete. Visitors to this and to other more famous ruins will be familiar with the practice of concealing ferro-concrete beams in the thickness of the walls of these lime-built ruins.

If there is one detail of which the members of the Society have experience it is the behaviour of wrought iron in old walls, yet the Committee has not thought it expedient to question its use in these official repairs. The position of heavily reinforced beams at Rievaulx is such as to cause serious apprehension not only on

account of the risk of disintegrating the old work, but on account of the fact that when the time comes for repairing these hidden ferro-concrete members the operation will be impossible without great disturbance to the original work.

It is more than ever desirable that a documentary record of repairs should be kept for all future reference in order, for example, that these hidden mysteries may be located and that such features, as steel purlins cased in oak to imitate solid timber members, may be watched.

While it is satisfactory therefore to note the change in the Society's outlook, it is disquieting to find it supporting wholesale anticipated repair and the use of untried and doubtful processes.

No two problems in repair are alike, yet it is a matter of regret to observe that the Office of Works should persistently apply modern engineering methods and materials to these ancient lime-built structures.

It has long been hoped by many that the official treatment of old buildings in this country should differ from Continental practice; there are signs that the reverse may be feared. The concluding movement of the Society's annual report proceeds through a splendid series of delightful subjects, submitted to the care of Mr. Weir and other soloists, to a finale set in a minor key deploring the demolition of a Wren brick house at Wolverhampton. This important place, one of the few remaining old buildings in the town, was removed to make way for a technical school. It should be recorded that the Art Committee of the R.I.B.A. made a great effort to save the building.

Plans were prepared at great pains to show that its removal was unnecessary, and indeed that it made an efficient central feature in the school plan.

W. A. FORSYTH [F.].

SCHOOL DESIGN IN SWITZERLAND.

Les Nouvelles Constructions Scolaires en Suisse: Ecoles Primaires, Secondaires, Salles de Gymnastique, Hygiène, Décoration, etc. Par Henry Baudin, Architecte. La. 40. Geneva and Paris, 1917. 80 fr. (Swiss). [Librairie Kundig, Librairie de l'Institut, 4 rue du Rhone, Geneva.]

Those of us who have had the pleasure of reading such works as *Les Constructions Scolaires en Suisse* and *Villas et Maisons de Compagne en Suisse* will feel assured that any work coming from the pen of Monsieur Henry Baudin is thorough, and as such worthy of study, and in holding this assurance we shall not be disappointed; for the work in question is treated from every standpoint in a masterly manner. It is excellently produced, clearly printed, copiously illustrated, and in an interesting manner the author deals with the educational system of the Republic which has brought about the 101 fine buildings detailed by Monsieur Baudin in his work.

The perusal of this work has once again raised a thought which is worthy of repetition.

I have had the honour of reviewing many books on school planning, and I have often wondered that some one has not provided a series of notes, dealing with the plans and elevations, in which is set out the differences as existing between English schools and those of the various continental powers. True it is that we have the very fine work of the Architect to the Board of Education and other works which have been published from time to time; but I have no recollection of any book which does more than give—may I term it so?—methods of planning, giving by way of example illustrations of existing buildings without explaining why it is that the educational authorities of such lands as the one we are dealing with consider it best to treat, say for instance, the gymnasium as we find it treated in many schools, and, further, the reason for utilising the corridor as for cloaks instead of the separate system as with us.

Space will not permit of my dealing with details in any great length or with a subject which is yearly becoming of more and more importance. Suffice it to say that it is evident from the work before me, and the examples illustrated, that the Republic of Switzerland recognise that by providing well planned, well lighted, warmed and ventilated buildings, they are doing one of the greatest services to the State that is possible on the part of any Government.

One cannot fail to be impressed with the genuine endeavour to provide the best possible for the children of the land. The style is, of course, to a great extent national, with a certain amount of Southern-Germany feeling incorporated; but it is when one comes to the minor details—the bath, the corridor, the frieze, the fountain, and other things, that one sees how much this little nation considers it necessary to provide for all essentials and/or form and colour in a tasteful way. For the truth of this statement one has only to examine the work under consideration. There is no doubt that the school of Switzerland is provided with a wealth of detail quite unknown in our buildings. Every school, large and small, in town or country, appears to contain some feature of interest and artistic merit. The treatment of the interiors is almost without exception fraught with care and thought, and in many cases must be most delightful to contemplate. Monsieur Baudin's treatise opens with a chapter, excellently illustrated, dealing with the school type, the position of the building on the site, and the aspect, following which the author deals with the plan and its many essentials, such as corridor and cloak-room, offices, bath and fountains, finally dealing with accommodation per school and per classroom, giving a table well worthy of consideration. Over and above such matters the book is copiously illustrated, with examples of town schools, country schools, subsidiary buildings such as the gymnasium, the laboratory, the covered

playground, etc., together with 101 most charming examples of the frieze, the fountain, and other details. The work has been produced by the Ateliers Atar Genève, which is to be congratulated upon a charming book, worthy of the shelves of any library.

A. HERON RYAN TENISON [F.].

REINFORCED CONCRETE CONSTRUCTION. Part II. (2nd Edition). By M. T. Cantell. London: E. and F. N. Spon, Ltd. 1921.

This volume supplements the more elementary treatise already published as Part I., and purports to deal with "all types of structures for which reinforced concrete is at present generally employed." Some forms that are fairly common have, however, been passed over; and amongst others it is noticeable that domes have escaped attention though a domed building is illustrated under the heading of "Roofs." The practice of giving many worked-out examples which the author has adopted is one that has great advantages in enabling a student to grasp the *modus operandi* to be followed; but the general explanations are in some places a little lacking in clearness. A fault of not infrequent occurrence is the stating of moments in pounds. This is serious: moments are not measured in pounds. The illustrations, moreover, are disappointing, especially the half-tone blocks. Another regrettable feature is the fact that the symbols employed do not follow the very rational system proposed by the Concrete Institute and do not appear to be an improvement on it. The list of symbols, moreover, does not include by any means all the symbols used in the body of the book.

JOHN H. MARKHAM [A.].

Correspondence

"UNIFICATION AND THE INSTITUTE."

28 October 1921.

To the Editor, JOURNAL R.I.B.A.,—

DEAR SIR,—In view of all that has taken place I cannot think that Mr. Frederick R. Hiorns' remarks represent the feeling of many of our members in relation to this matter. The demand for unity has been general and insistent for so long that as far back as July 1914 the General Body instructed the Council to seek a new Charter and to establish a voluntary register. The experiences of the war only made the demand more imperative, and the General Body, at its meeting in March 1920, gave approval to a more extended and comprehensive scheme than before. This scheme was worked out by a committee representing every section of the profession, and it became evident that the Institute must either take the lead and bring into its membership all qualified architects, or must place itself, with all the other societies and associations, under a central governing body. The former alternative was adopted

without hesitation in May last, and the details of the scheme are now in course of being carried out.

No one suggests that unification will take the place of education, but it is clear that the mere fact of the examination which will be compulsory in the future will stimulate education very materially, and for my own part I believe that architects now outside any organised body will show in their work the stimulus that will come out of the change.

Mr. Hiorns speaks of irregular additions being made to membership of the Institute, but it is unfair to use this word. The whole thing is being done regularly; the resolutions that have been taken have been extraordinarily unanimous, and the new Charter that is to be obtained will secure the regularity of all new admissions. It is not intended to admit men broadcast without reference to their qualifications: we have for years past had separate classes in the Institute to mark the necessary distinctions, and this method is surely sufficient to give all the safeguards that are wanted.

Mr. Hiorns writes in a moderate and reasonable way, and I think he will realise that all the points raised by him have been fully considered by those who are dealing with the matter and by those who, from time to time, have authorised all that is being done. He knows that reforms cannot be made without accepting some drawbacks or defects: the main point to be kept in mind is that the profession has suffered in the past by being divided and weak, and that steps are now being taken to weld it into a single force which will be operated by an Institute Council representing the whole profession. There may, perhaps, be some small sacrifice required, but it cannot be more than a little: the possible gain is worth a great deal.—Yours very truly,

ARTHUR KEEN [F.].

DOMINION BRANCHES OF THE INSTITUTE.

2 New Square, Lincoln's Inn, W.C.

17 October 1921.

To the Editor, JOURNAL R.I.B.A.,—

SIR,—In the JOURNAL for 24th September last Mr. G. A. T. Middleton asks an interesting question. He enquires: "Why not Dominion Branches of the Institute?" He shows that, by the Charter of 1887, such an Imperial development, architecturally, was provided for, but, subject to such definition, regulation, or prescription as the Bye-laws might provide. They appear to provide none. In fact, they allow for the representation of the Allied Societies "within the United Kingdom" only. On the Executive of the Central Body those in the Dominions have no such voice in our deliberations. This point was discussed by me, as the representative of the Architects and Allied Societies of the Australian Commonwealth on the Unification Committee, with a representative from that Dominion in September last year. He desired me to raise the question. I replied that this had been done by letter to the

Secretary in 1919. But at the same time it appeared to me that any definite suggestion as to method would perhaps come best from overseas.

It is interesting to be able to record that when this situation was, in effect, challenged by an amendment at the Special General Meeting on the Unification and Registration proposals, in March, 1920, the representatives of the General Body, then present, unanimously approved the omission of the words "in the United Kingdom" from the resolution under consideration. By this act they showed their clear desire that, not only the local but, also, the Overseas Allied Societies should be represented on the Committee dealing with those proposals. The first step in an Imperial relationship, on a more definite basis, was then taken by the Institute itself. And the Dominions were duly invited by the Council to accept representation. This they did, and they now may speak here, on questions affecting unity and registration, if they wish.

Imperial unification, therefore, with a strictly secured local autonomy, may become possible subject to the approval, in each Dominion, of any scheme that may be devised so far as it can apply to them.

Registration, however, cannot be a matter of general application through the Empire. That is a question of legislation. And on such a principle each Dominion Legislature, and in some cases the State Legislatures, must decide by a separate Bill or Bills. The House of Commons cannot enact a measure which shall carry authority elsewhere. Although, no doubt, if registration became a fact here it might be hoped that the Act at Home, and the debates on it, at an earlier stage, would prove useful if, and when, any one of the Dominions desired to move in a similar direction. This seems one reason for supposing that unification may be a first step towards registration. Architects can effect unity by their own action. But for registration we must wait on the will of others. One thing appears certain, and it is that, unless we can plead the representative weight of a united profession, having got rid of sectional divisions within it, no legislative body will allow itself to be bothered by claims for registration, or any recognition in a statutory sense.

Opportunity will, no doubt, be given for the expression of views in the appropriate quarter on the matter of further procedure in the direction of an Imperially united profession. The question may not be whether Dominion Branches should be established, but, whether the Dominions will seek to convert existing Societies into self-governing Branches, in close affiliation with the Royal Institute. We already have Allied Societies overseas, which, if they wish, may develop into such Branches. There might be, no doubt, one in each Dominion, with its own local, State, Allied Societies. Such a development seems a Dominions' affair. We, perhaps, may rest satisfied if we can establish such

relationships with architects and architectural Societies in the Dominions, India, and the Colonies, as may from time to time become possible. But, always, with a due regard for those questions affecting National and Dominion, or Colonial, status, responsibility, and local autonomy.

For as the Prime Ministers of the Dominions in conference with Great Britain do not, by that act, commit their respective Governments, so the Presidents of the Allied Societies in the United Kingdom, though, in their case, members of our Central Executive, do not, by thus contributing their aid, in any sense shackle or diminish the local authority of their own Societies.

In fact, professional unity among architects throughout the Empire, with or without registration, would only now be possible within the limits imposed by political or legislative responsibility, and along lines suggested by inter-governmental conditions as we find them to-day. And we must see, in any attempts that are made towards unity, that they shall not place limitations on architecture as a fine art in so far as the future may provide for its encouragement or expression by the Empire. For it is well to remember, always, that the Charter gives us authority, as a Body, to advance, promote and facilitate the acquisition of knowledge connected with architecture, because it is "an art esteemed and encouraged in all enlightened nations." And because it tends "greatly" to promote the domestic convenience of citizens and the public improvement and embellishment of towns and cities. That is the first object of our corporate existence. We are only secondarily concerned with the well-being of architects themselves as practitioners, professional men. But we must insist, so far as we may, on a high standard in their qualifications, their education, as architects, in the public interest. The education of architects, in architecture, is a long and slow process. The education of the public in the same is longer, and the education of officials longest. But at any rate the Charter gives us an ideal. It is neither selfish, sordid, nor exclusive. It has a largeness of generosity about it which appeals to the decent British instinct through all the Empire. And it is well worth following up.—Yours faithfully,

HUBERT C. CORLETTE [F.].

ARCHITECTS AND HOUSING: HOW TO ADD £450,000 A YEAR TO OUR INCOME.

50, Norfolk Square, Paddington, W.2,
27 October, 1921.

To the Editor, JOURNAL R.I.B.A.,—

DEAR SIR,—We are passing through a phase of acute depression for architects, as for everyone else; it is a time of change when the new order is in the making. Is it too much to hope that architects will cease to stand by idly (as has been their wont) while the bulk of the building of the country falls back into the hands of

unqualified men? Such a policy of inaction robs architects of a vast source of income, and, which is far more reprehensible, inflicts immense damage upon the community.

The exclusion of qualified architects from a share in past housing activity has been to a large extent the fault of the profession itself, and, while architects continue to insist on full-scale fees, it is obvious that as soon as speculative building is resumed their services will be dispensed with. The scale of fees, as arranged with the Ministry of Health in G.H.M. No. 31, would be prohibitive to a speculative builder, and under it the architect is expected to do far more than the builder would require or even agree to.

The housing need which will have to be met in some way or other amounts to 150,000 houses a year. If architects were to obtain what one might call a "royalty" of only £3 per house, the profession's income would be increased by the stupendous sum of £450,000 a year, and the country would gain more than could be assessed in terms of money. £3 per house may at first sight appear to be a very small fee, but the architect's work would be correspondingly light. The speculative builder or his successor would not require specifications, beyond a description of the salient materials, he would not expect elaborate drawings. The architect would act as an adviser or consultant, would indicate the best form of lay-out, and plot the position of type blocks, which he would supply to $\frac{1}{2}$ -inch scale, and could, of course, use as often as he pleased. He would have no responsibility beyond advising on these matters, neither would he be called upon for any supervision.

The alternative to some such arrangement is that housing will slide back to the old intolerable position, when one "blue-print" house (not even designed by a qualified architect) will be repeated in terraces over acres of country. To my personal knowledge this is beginning again, and if anything is to be done, it must be undertaken quickly and vigorously.

The builder should be only too glad to join forces with the architect, because the house of the future will have to bear comparison with the Government houses, and it would be sound business to spend a little more in improved amenity at the outset; but he neither can nor will have dealings with us unless we are prepared to recognise that the position of housing is unique, that it cannot be treated on the same lines as hospitals, churches, or commercial buildings.

My suggestion is, therefore, that the Institute should approach the National Federation of House Builders and see whether some kind of co-operation can be arranged. To any architect who places his country and his work first such a course must commend itself, because he cannot sit still and see the old form of housing creep back. To the more commercially minded the

proposal should make an appeal, because the profession could in this way increase its income by some £450,000 a year.—Yours faithfully,

MANNING ROBERTSON [A.].

THE GOVERNMENT'S FUTURE HOUSING POLICY.

3 Queen Street, Cheapside, E.C.2.
Sept. 27, 1921.

To the Editor, JOURNAL, R.I.B.A.,—

DEAR SIR,—In the JOURNAL of September 24, 1921, Mr. A. P. Durlacher blames the Council and individual architects for condemning Government housing schemes unless they can produce alternative schemes and *guarantee success*. Is Mr. Durlacher serious in this suggestion that we should not criticise Government policy unless we are prepared to do their work?

Your correspondent also says that "it has been reiterated *ad nauseam* that the building trade left to itself could have provided all the houses required." May I suggest to Mr. Durlacher that neither the Council, nor any individual architect, has made the bald—and bold—statement set out above. What has been said is that the building trade, left alone, would have done better than the Government has done. The Minister of Reconstruction, after a full year to improve his mind on the details, promised us "homes for heroes." Surely we are now justified in pointing out that he has failed—and that he might have succeeded.

For example:—

1. In 1917 the Minister of Reconstruction was advised to grant a subsidy equal to the difference between actual and commercial rentals. He refused, wasted time, then gave a subsidy which was insufficient; wasted more time, and then did in 1920 what might have saved the situation in 1918-1919.

2. Before the Armistice it was pointed out to the Ministry of Munitions Housing Section that temporary housing schemes could be converted into cottages for demobilised men.

This suggestion was neglected until 1920, when the schemes were handed to local authorities for conversion at double the cost.

3. It was pointed out to Government Departments that the most necessary want would be cheap capital. If the Government could borrow at the current rate of interest and lend at a low rate over a long term of years for repayment, public utility societies would be able to carry on.

Public utility societies have not been able to work under the Government policy.

Had these things been done we should have been saved the confusion the Government created; but of themselves they would not have made a new heaven and a new earth; other things were necessary.

1. The Report of Lord Balfour of Burleigh's Committee published in 1901 (five vols.) was final on the necessity of rating reform; but the Government ignored it.

2. The Report of Poor Law Commission of 1909, especially the minority report, should have provided material for a Minister of *real* Reconstruction.

3. The two volumes of the Land Enquiry Committee, 1914, would have given most valuable information to expert advisers of the Ministry, if they could have been persuaded to read them.

In November, 1918, the Minister of Reconstruction had all the material and information to enable him to fulfil his promises, solve the housing question, and the problem of unemployment.

Now, Sir, allow me to deal with the questions put by Mr. Durlacher.

1. If the Government had lent local authorities at a low rate over a long period, speculating builders would have provided houses to the satisfaction of local surveyors and engineers.

2. Architects have not recanted everything—we are not dealing with the employment of architects but with the housing of the people. It is a mistake to call all speculating builders "enemies" of the architect.

3. Many smaller contractors would have carried out work under architects for the above-named owners: the larger contractors do not want this class of work.

4. Yes. It was generally acknowledged that the Government was forced to step in: but, unfortunately, the Government always "did those things which it ought not to have done, and left undone those things which it ought to have done."

Mr. Durlacher says, "now is the time for wise heads to formulate a better scheme"; but he forgets that the wiser heads now have to contend with the unknown quantity of chaos created by the Government.

If the Government will scrap the Housing Section of the Ministry of Health and H.M.O.W. Housing Department, and appoint a Housing Board of real experts *who were interested* in the housing of the people *before the war*, with a first-class statesman as chairman, we might overcome our difficulties. Mr. Holtom is of course quite right in his statement, which seems to surprise Mr. Durlacher. Housing and rating are twins, and must be settled together; and the neglect to grasp this is one of the signs of the inefficiency of the Government experts. It may also surprise your correspondent to know that speculating builders gave up erecting working-class houses years before 1914, as did also public utility societies, except in rare and exceptional circumstances. Unfortunately, all our problems are increasingly difficult to-day, because the Government has not only failed to solve questions, but it has demoralised the whole country by its methods of business. One thing necessary can, and must, be done without the

Government—i.e., we must arrive at a full and long settlement between Capital and Labour in the building trade on the lines set out in the Foster Report.

Faithfully yours,

JOHN E. YEBBURY [*Licentiate*].

MR. H. G. TAYLER'S RETIREMENT.

45, Brailsford Road, Tulsa Hill, S.W.2.

1 November 1921.

To the Editor, JOURNAL R.I.B.A.,—

DEAR SIR,—I should like to be allowed to add a few words to Mr. Slater's farewell to our friend Mr. Tayler.

I have known Mr. Tayler for a very long period in connection with his work at the Institute, and shall always remember the assiduous and careful attention that he gave to every detail. On many occasions I have been associated with Mr. Tayler at the examinations and the annual audit, and should like to say how I appreciated his indefatigable and invaluable help. At the annual audit, where many points require elucidating, it was always refreshing to watch Mr. Tayler, who could give you at once the *pro* and *con* for every query. His books were always in such excellent order, and his general system so perfect, as to render the duty of auditor a most pleasant task.

Mr. Tayler has been so many years at the Institute, and is so well known, that he will, I am sure, be missed very much, and so conclude and hope that he will enjoy a rest which he has so very fully earned.—Yours faithfully,

ARTHUR W. SHEPPARD [*A.*].

MR. NORTHOVER'S RETIREMENT.

To the Editor, JOURNAL R.I.B.A.,—

SIR,—As an old but only semi-attached member of the Royal Institute, may I add my own small tribute to Mr. Northover in the JOURNAL, of which he was so great a part. I used in now forgotten days to give him quite a little trouble in his editorial capacity, and I remember well how courteous and considerate he always showed himself in personal relations, and with what conscientious care he looked after the technical details on which the good appearance of the JOURNAL so largely depended. The Institute owes him much.—I am, etc.,

G. BALDWIN BROWN,
Hon. Associate.

VACANCY FOR ARCHITECTURAL ASSISTANT IN ZANZIBAR.

With reference to the announcement in the August issue of the JOURNAL, the Secretary has been informed by the Crown Agents for the Colonies that the appointment of an Architectural Assistant for Zanzibar will be made by the Crown Agents in London.

Candidates for the appointment who have already applied direct to Zanzibar should therefore renew their application to the Crown Agents.

Further particulars of the appointment can be obtained on application to the Secretary, R.I.B.A., 9 Conduit Street, W.1



9 CONDUIT STREET, REGENT STREET, W., 12 Nov. 1921.

Chronicle

INAUGURAL MEETING.

At the opening meeting of the Session, when Mr. Paul Waterhouse delivered his inaugural address, there was present a large, distinguished and representative audience, including the Rt. Hon. the Earl of Crawford, the Rt. Hon. Lord Sumner, Sir Aston Webb, P.R.A., Sir Sydney Russell-Wells (Vice-Chancellor, University of London), Sir Henry Newbolt, Sir Reginald Blomfield, R.A., Sir Anthony H. Hawkins, Sir Charles J. Holmes (Director of the National Gallery), Professor J. W. Mackail, Sir Lionel Earle, Sir Charles Ruthen, Sir Banister F. Fletcher, Sir A. Brumwell Thomas, Mr. Ernest Newton, R.A., and Mr. F. W. Pomeroy, R.A. During the evening a telegram was received, Mr. John W. Simpson, the late President, who is at present in Cairo, sending his congratulations and best wishes to the Council on the occasion of the opening meeting of the Session.

THE CROWN PROPERTY.

The Home Secretary stated in the House of Commons on the 20th October that a Committee had been appointed to examine the question of concentrating in one department all Government purchases and sales of land and buildings and the management of the estates of the Crown and Government property. The Committee was constituted as follows:—Sir Howard Frank (Chairman), Sir Frederick Ponsonby, the Hon. Edward Gerald Strutt, Sir John Stirling Maxwell, Sir Warren Fisher and Sir John Herbert Oakley. The work of the Commissioners of His Majesty's Woods, Forests, and Land Revenues would be the main subject of the investigation of the Committee. According to *The Times*, the inquiry may be wide enough to enable the manner in which leaseholders are dealt with on the Crown estates in Regent Street and elsewhere.

CANADIAN ARCHITECTS.

On 10th and 11th October a joint convention of the Royal Architectural Institute of Canada and the On-

tario Association of Architects was held, at which Mr. J. P. Hynes was elected President of the Ontario Association, and Mr. David R. Brown re-elected President of the Royal Architectural Institute. The meetings were attended by more than two hundred architects from various parts of the Dominion. Mr. F. S. Baker of Ontario writes that it is intended at the approaching session of the Ontario Government to press for an amendment of the Ontario Architects Bill (omitting the word "registered,") which has been in the hands of a Government Committee during the past year. The meetings of the convention indicated that private building is still at a low ebb, but that competition between contractors is keen, and prices inclined to fall.

"BEAUTY IN COMMON THINGS."

Mr. Arthur Keen [F.], with reference to a recent speech delivered under this title, advocates in *The Architects' Journal* the educating of the public in the appreciation of the beauty of English architecture by which almost everywhere we are surrounded. "The surest guarantee that future developments will be properly dealt with," Mr. Keen writes, "lies in appreciation of the beauty of existing things; and while we may assume that architects will estimate the work of the past at its true value, it is necessary for the general public" to distinguish the difference between an old country and a new one. Architects, Mr. Keen suggests, should assist the public by coming before them and "speaking plainly on the subject." "It is easy in London and other cathedral cities to direct attention to the beautiful things that have been handed down, but there are few places where there is not something to form a basis of discussion. . . . The societies allied to the R.I.B.A. might do a great deal if they agreed upon systematic action in a joint campaign of educating people in the present interest and the future development of their districts and cities."

LECTURES ON ARCHITECTURE AND THE DECORATIVE ARTS.

A series of four "Discourses" upon architecture and the decorative arts has been arranged, under distinguished patronage, to be given during November, at Lansdowne House and other addresses in the West End, in aid of various charitable objects. The first discourse was given by Mr. H. Avray Tipping on "English Furniture of the Tudor and Early Stuart Period" on 3rd November; Mr. Robert P. Oglesby lectured on Early English Renaissance Architecture on 10th November; and Mr. J. Starkie Gardner will give the third discourse on 17th November, at 27 Belgrave Square, W., on "Decorative Lead Work of the Queen Anne Period." Lady Constance Hatch and Lady Murray are the chief promoters of the lectures, the idea of which was suggested by the public lectures given at the Institute in the spring.

JOURNAL OF THE ROYAL INSTITUTE OF BRITISH ARCHITECTS

ROYAL SOCIETY OF ARTS.

Mr. T. H. Lyon, M.A., Director of Design in the University School of Architecture, Cambridge, will, on 16th November, read a paper in the lecture hall of the Society of Arts on "Modern Buildings in Cambridge and their Architecture." Mr. Basil Oliver [F.] will take the chair at 8 o'clock.

NEW SLADE PROFESSOR AT OXFORD.

Mr. Arthur M. Hind, M.A. (of the Department of Prints and Drawings, at the British Museum), has been appointed the new Slade Professor at Oxford. Mr. Hind is one of our chief historical authorities on the arts of engraving and etching; his many histories and catalogues on these subjects are well known to all students.

OXFORD CREEPERS.

Sir Thomas G. Jackson has engaged in the correspondence which has recently been appearing in *The Times* on the extravagant encouragement of creepers on old buildings at Oxford. "Besides," he writes, "the impropriety of hiding what was meant to be seen, I would insist on the mischief which vegetation may do, and does, in many cases to old walls." While discountenancing such dangerous, if beautiful, growths of ivy and Virginia creeper, there is no reason, Sir Thomas states, why the banishment of these dangerous growths need strip our walls bare. "They can be decked with roses, jessamine, wisteria, and a hundred other climbing plants that do no harm, and admit of training and trimming so as not to disguise or hide what we would wish to leave exposed to view." *The Times*, in a leading article, suggests that we are so used to ivy and other growths upon ruins where they have grown through neglect that, with our modern love of the picturesque, we treat the masterpieces of the past as if they too were ruins. "But the picturesque is always a *pis-aller*; the word means something that would look well in a picture or something that suggests a picture, something happily accidental. But good building is not happily accidental; it is always what the builder himself intended."

ART AND ELECTRIC WIRES.

Professor G. Baldwin Brown has written a letter of protest to *The Times* on a decision of the Edinburgh Town Council to instal a system of overhead wires for tramway traction in the streets of Edinburgh. The Council are arranging to substitute for the usual fastenings to posts, posts which could at any time be removed, attachments to "rosettes" riveted on to the fronts of buildings, "thus spreading those unsightly wire entanglements across the foot pavements, and clamping them, as it were, in permanence to the very body of the town." The University Court has been asked to sanc-

tion the attachment of two ornamental rosettes, which Professor Brown describes as pitifully tasteless, to the architectural masterpieces of Robert Adam, the façade to the Bridges of the Old University buildings. Professor Brown states that the "threatened outrage" meets with considerable resentment in Edinburgh.

BOARD OF ARCHITECTURAL EDUCATION.

The Council of the Institute have recently extended an invitation to various representatives of the architectural and art societies, universities and colleges in the United Kingdom and the Dominions to act as advisory members to the Board of Architectural Education. The following representatives have so far accepted the invitation: Sir Ernest Newton, C.B.E., R.A. (Royal Academy), Prof. E. S. Prior, A.R.A. (Cambridge), Mr. C. de Gruchy (Royal Academy School), Prof. Patrick Abercrombie (Liverpool), Mr. G. Washington Browne (Edinburgh), Mr. H. T. Buckland (Birmingham), Mr. W. H. Bidlake (Birmingham), Mr. L. Sylvester Sullivan (Society of Architects); The Rev. Dr. Chilton (City of London School) and Mr. C. H. Greene (Berkhamstead School), Headmasters' Conference; Prof. Leslie Wilkinson (Sydney), Prof. Percy Nobbs (Montreal), Prof. Ramsay Traquair (Montreal), Mr. Adrian Barrington (Toronto), Prof. R. W. Cable (Bombay).

ROYAL ACADEMY LECTURES.

Dr. Laurie, Professor of Chemistry in the Royal Academy, will give the six following lectures in the R.A. Lecture Hall, beginning each day at 4 p.m.

1. Wednesday, 16th November.—"Medieval Pigments and Mediums."
2. Thursday, 17th November.—"Modern Pigments: their proper Selection and Use."
3. Friday, 18th November.—"Painting Media: Oils, Varnishes, and Tempera."
4. Monday, 21st November.—"Methods of Wall Painting."
5. Tuesday, 22nd November.—"The Theory of Colour and its Application to Painting."
6. Wednesday, 23rd November.—"The Nature and Properties of Building Materials; Bricks and New Methods of Making Them."

THE LATE CARETAKER OF THE INSTITUTE.

Many members of the Institute will recall William Berwick, the late porter and caretaker of the Institute, who, in consequence of a paralytic seizure, was compelled to resign his position last year. After a long period of convalescence, during which he never wholly recovered, he has now died. Sympathy of members of the Institute will go out to his devoted wife, who assisted him in his work. Berwick's long service at Conduit Street, his amiable character, and spirit of willing service, gained him universal respect.

The Library

NOTES BY MEMBERS OF THE LITERATURE COMMITTEE ON
RECENT ACQUISITIONS.

[These Notes are published without prejudice to a further and
more detailed criticism.]

WATER-COLOUR PAINTING. By Alfred W. Rich. With
67 illustrations. 80, Lond. 1921. 10s. 6d. net. [Seeley,
Service & Co., Ltd., 38 Great Russell Street, London.]

An interesting book which gives elementary advice on
materials, colours and methods generally. The author gives his
own sketching experiences in different parts of England and a
brief *résumé* of the work of English water-colourists of the
eighteenth and nineteenth centuries and also of present-day
artists. H. C. B.

ETCHING AND OTHER GRAPHIC ARTS. By George T.
Plowman. 80, Lond. 1914. 10s. 6d. net. [John Lane,
The Bodley Head, Vigo Street, W.1.]

A guide for beginners, giving much technical information and
formulae for the making of etchings. The bibliography and list
of addresses at the end of the book should make it popular.
With regard to the illustrations, the author might have included
with advantage drawings by such masters as D. Y. Cameron,
Muirhead Bone, J. J. Shannon, and Joseph Pennell, and might
have contented himself with fewer examples of his own work.
H. C. B.

AN OLD COTTAGE SAVED: How derelict cottages at
Drinkstone, in Suffolk, were brought into use again, and
what the work cost. Published by the Society for the Pro-
tection of Ancient Buildings. Prepared by the Secretary,
A. R. Powys, with an introduction by A. H. Powell. Pam.
80, Lond. 1921. 2s. 6d. net. [A. R. Powys, Secretary,
20, Buckingham Street, Adelphi, W.C.]

This little book should be in the hands of every one interested
in rural housing. It shows how the Society for the Protection of
Ancient Buildings repaired two tumble-down old cottages and
rendered them not only habitable but commodious, at a cost
less than that of one new Government cottage, and with great
benefit to the beauty of the countryside. It is quite simply
written so as to be understood by laymen; the original defects
and the steps taken to remedy them are clearly set out in detail,
with the reasons for the treatment in each case, and it is
copiously illustrated with photographs. A careful summary of
the cost of the various items is given, and in connection with
this an unfortunate slip has been made. In comparing the cost
of the two old cottages with one Government cottage the cost of
the latter is given as "£950 exclusive of site," and of the former,
"£722, including the site, freehold."

Now the cost of the repairs alone is put at £722, so that the
original cost of the old buildings and the site should be added,
but in any case the comparison on every ground is in favour of
the old cottages. C. E. S.

L'ART RUSSE, des origines à Pierre le Grand, par Louis Réau.
La. 80, Paris, 1921. £1. [Henri Laurens, 6, Rue de Tour-
non, Paris.]

Though, considered geographically, Russia is to be looked
upon as forming an integral part of Europe, it is a paradox that
with the manifestations of its Art we are less acquainted than
with those of the Nearer or, indeed, the Extreme East. The
literature dealing with its architecture, in especial, is small in
extent, and M. Réau's work, of which a generous proportion
covers that ground, is a welcome addition, as supplementing
Viollet le Duc's beautifully illustrated volume (published in
1877), and bearing the same title as the present work. The
latter, indeed, very plainly puts forward the claim to be the
means of filling certain of Viollet le Duc's *lacunes*, and as having
been written at first hand, and with such an acquaintance with
the country itself as the author's official position in Petrograd
may be supposed to give him. C. H. T.

JERUSALEM 1918-1920, being the Records of the Pro-Jerusalem Council during the period of the British Military Administration. Edited by C.-R. Ashbee. 40, Lond. 1921. £2 2s. net. [John Murray, Albemarle Street, W.]

An account is given by Mr. Ashbee of the various works
undertaken by the Society with reference to the Old City and
the New Town plan. Technical Education, New Industries,
and Civic Regulations are included in his Review. Numerous
photographs illustrate the condition of the city as it was, and
plans and drawings suggest how it may appear in the future. It
is an interesting and important publication. J. A. S.

LES CONCOURS D'ARCHITECTURE 1920-21, par
L'Ecole Nationale Supérieure des Beaux-Arts. Sm. 60,
Paris, 1921. £1 4s. [Auguste Vincent, 4, Rue des Beaux
Arts, Paris.]

This latest series of plates of the Concours in Architecture of
the Ecole des Beaux Arts contains little that is new either in the
way of programmes or of solutions. Lighthouses, stations and
monuments follow the usual lines. The programme for the
Labarre—"un établissement pour les invalides de la guerre"
—is interesting, but could not be properly developed in the
three days allowed for this prize. The presentation and draughts-
manship for both "esquisals" and "rendus" have in all cases
the merits which we have learnt to associate with the traditions
of the Beaux-Arts. H. C. B.

**DEUTSCHE WOHN- UND FESTRÄUME AUS SECHS
JAHRHUNDERTEN**, herausgegeben und eingeleitet, von
C. H. Baer. 40, Stuttgart, 1912. £1 5s. [Von Julius Hoff-
mann, Stuttgart.]

A selection of about 250 photographic views of interiors in
Germanic countries from the thirteenth to the early nineteenth
century, comprising characteristic examples of all styles of every
degree of simplicity and richness. W. H. W.

120 INTERIEURS EN COULEUR. (Suite de la Couleur
dans l'Habitation.) 2^e édition. 80, Paris n.d. £2 net.
[Paris, Société du Livre d'Art Ancien et Moderne, 4, Rue
de Savoie (Vie).]

A volume of views of interiors of dining-rooms, drawing-
rooms, bedrooms and halls, the colour schemes of which are
shown in 120 plates, most of them good facsimiles of spirited
and suggestive water-colour sketches. Notwithstanding the
French title of the book, and its publication in Paris, the ex-
amples given are German and Austrian, with about half a dozen
by English architects. Nevertheless, the work is of interest.
C. H. T.

LES VIEUX HOTELS DE PARIS. Le Faubourg St.
Germain. Vol. V.

This instalment of an admirable publication is well up to
the standard of interest of its predecessors, and contains views
(exterior and interior) of several great houses of the Louis XV,
Louis XVI, and Empire periods, many of which I do not re-
member to have seen illustrated before. W. H. W.

AD QUADRATUM: A study of the geometrical bases of
classic and mediæval religious architecture, with special
reference to their application in the restoration of the
Cathedral of Nidaros (Throndhjem) Norway, by Fredrik
Macody Lund. Profusely illustrated by plans, sections,
views and details of notable Temples, Churches, Cath-
edrals, and other buildings in Greece, Italy, Germany,
Denmark, France, England and Norway. Printed by
order of the Norwegian Parliament. 2 vols. La. 40.
Lond. 1921. £5 net. [B. T. Batsford, Ltd., High
Holborn, London, W.C.]

Franco-British Union of Architects

The Franco-British Union of Architects, the inception of which was due to the initiative of Mr. John W. Simpson, the late President, held its first meeting in the rooms of the Institute on Monday, the 24th of October, at which was present a representative gathering of French and English original members. At this meeting the following members were elected to form the Council (Bureau) of the Union for the session 1921-1922:

Président: M. Albert Louvet, président de la S.A.D.G., Architecte en Chef des Bâtiments Civils, Officier de la Légion d'Honneur.

Vice-Président: Mr. John W. Simpson, F.R.I.B.A. (Membre Corr. Institut de France, Membre Corr. S.A.D.G.).

Secrétaire-Général: Lieut.-Col. H. P. Cart de Lafontaine, O.B.E., T.D., A.R.I.B.A. (Membre Corr. S.A.D.G.).

Tresorier: M. Poupinel (Tresorier S.A.D.G., Officier de la Légion d'Honneur).

British Members: Sir Reginald Blomfield, R.A., Litt.D., F.R.I.B.A. (Membre Corr. S.A.D.G.); Professor Patrick Abercrombie, F.R.I.B.A.; Mr. Arthur Keen, F.R.I.B.A.; Mr. Ernest Newton, C.B.E., R.A., F.R.I.B.A. (Membre Corr. S.A.D.G.); Mr. A. N. Paterson, A.R.S.A., F.R.I.B.A.; Mr. Paul Waterhouse, M.A., F.S.A., P.R.I.B.A. (Membre Corr. S.A.D.G.); Mr. A. J. Davis, F.R.I.B.A. (Honorary Secretary, British Section).

French Members: M. André (Chef d'Atelier E.D.B.A., Chevalier de la Légion d'Honneur), M. Arnaud (Professor E.D.B.A., Officier de la Légion d'Honneur), M. Defrasse (Architecte en Chef des Bâtiments Civils, Architecte de la Banque de France, Officier de la Légion d'Honneur), M. Godefroy (Architecte en Chef des Postes and Telegraphes, Officier de la Légion d'Honneur), M. Richardière (Vice-Président S.C., Vice-Président S.D.M.), M. Thoumy (Architecte en Chef des Bâtiments Civils, Secrétaire-Général S.A.F., Officier de la Légion d'Honneur), M. Schneider (Secrétaire-Général S.A.D.G., Honorary Secretary, French Section).

The delegates were received, before the meeting, by Mr. Paul Waterhouse; on the conclusion of the proceedings members were invited to visit the Institute premises, including an exhibition of valuable architectural books and drawings in the Library. On the same evening the delegates were entertained to dinner at the Café Royal by the President and the Council of the Royal Institute of British Architects. Mr. Paul Waterhouse presided, and the

following were present: Sir Reginald Blomfield, R.A., Professor Abercrombie, Sir J. J. Burnet, R.S.A., Monsieur E. Arnaud, Lieut.-Col. H. P. Cart de Lafontaine, Monsieur Japy (Second Secretary to the French Embassy), Mr. Septimus Warwick, Mr. W. A. Pite, Mr. Ernest Newton, C.B.E., R.A., Mr. E. Vincent Harris, Mr. Arthur Keen, Mr. H. T. Buckland, Mr. W. R. Davidge, Mr. Maurice B. Adams, Mr. Ian MacAlister, Mr. Wm. Woodward, Mr. John Slater, Mr. W. G. Newton, Mr. Maurice E. Webb, D.S.O., M.C., Mr. Raymond Unwin, Monsieur A. Richardière, Monsieur E. Thoumy, Monsieur G. Gaütruche, Monsieur A. Schneider, Mr. W. E. Riley, Mr. L. Rome Guthrie, Mr. W. Fleming Wilkie, Monsieur Pierre André, Monsieur A. Louvet, Professor S. D. Adshead, Mr. Arthur J. Davis, and Mr. E. Stanley Hall.

EXHIBITION OF PHOTOGRAPHS AND DRAWINGS OF AMERICAN ARCHITECTURE.

For the first time American architects were represented at the Paris Salon at the last Summer Exhibition. The drawings and photographs which were on view in the Champs Elysées have, at the invitation of the Institute, been brought over to England, and will be on exhibition in the Institute Galleries from 24th November to 9th December. The exhibition will be opened on the 23rd November by Lady Astor at 2.30 p.m., and remain open daily from 10 a.m. to 5 p.m. (Saturdays, 10 a.m. to 1 p.m.)

The exhibition consists of modern, if not always contemporary work. With one or two exceptions, however, retrospection is not carried farther back than thirty years. "True comprehension of the ancient styles; adaptation to contemporary life; minute, free and broad study of the most diverse programmes—such is the lesson offered by this exhibition," according to a writer in *Le Temps* during the exhibition in Paris. There is no doubt that its presence here will arouse the greatest interest.

ARCHITECTURAL ASSOCIATION SCHOOL OF ARCHITECTURE.

The Architectural Association have recently issued an attractive and well illustrated prospectus of the work done in connection with the School of Architecture. General information is given regarding the terms of admission and the course of study, which extends over a period of five years. Students who have had previous architectural training are admitted to the school, and can enter the first, second or third year course direct according to their standard of efficiency. The A.A. have also published a pamphlet containing illustrations of their premises at Bedford Square and views of the interior of the building,

Undercutting of Housing Fees

The Practice Committee, and subsequently the Council, have investigated a complaint in regard to the action of a firm of architects, of which both members are connected with the Institute, who were accused of quoting fees less than those of the scale agreed between the Institute and the Ministry of Health, and of accepting an appointment for a very large number of houses at such reduced fees. The Council considered that the complaint was well founded, and instructed the Secretary to write to the architects in question, informing them that—

"The Council have directed me to express to you their extreme dissatisfaction with your action in the matter, and to inform you that a repetition of such action would entail very serious consequences."

While informing members of the action taken, the Council have decided, in this case, not to publish the names of the offending architects.

Prizes and Studentships

"ARCHIBALD DAWNAY" SCHOLARSHIP.

In accordance with the terms of the will of the late Sir Archibald Dawnay, the Royal Institute of British Architects offer annually, for competition between students of recognised schools, three scholarships, two of £50 per annum for two years (£100 in all) and one of £25 per annum for two years (£50 in all).

The scholarships are intended to foster the advanced study of construction, and the improvement generally of constructional methods and materials and their influence on design, and will be awarded for excellence in construction with the idea of assisting the winner in the further study of construction.

The competition is open to all students of recognised schools who have completed within the preceding year, or are about to complete, their full three years' course in architecture.

Successful competitors will be required to register as students of the R.I.B.A. before taking up the scholarship awarded.

In the first instance applications must be made through the principals of the various schools, who will nominate candidates and submit evidence of study on behalf of the student or students nominated, in the form of notebooks and work already done in the school. Such application should reach the Board by the end of June each year.

A final selection will be made by the Board of Architectural Education, who will base their selection largely on the actual school work of the candidates, but should it be necessary a limited number of applicants will be required to submit to a further test in the form of a written paper or otherwise as the Board may direct.

(Provincial candidates will not be required to attend in London.)

The scholarships will be tenable at any recognised school selected by the successful candidates, who will be required to devote their time particularly to the object of the scholarship, specified above.

In all cases the second year of the scholarship will be subject to approval or revision by the Board.

Applications for renewal of scholarships must be made by the students direct to the Board not later than the end of June in each year, and be accompanied by evidence of study during the past year.

The scholarships are open to all subjects of Britain or the British Dominions, but are tenable only in the British Isles.

Final and Special War Examinations

ALTERNATIVE PROBLEMS IN DESIGN.

The Board of Architectural Education announce that the designs submitted by the following students who are qualifying for the Final and Special War Examinations have been approved :—

Subject LVIII.

(a) Design for a Triumphal Arch.

Lomax, A.	Minty, R. J. H.
Sugden, H. D.	Sidnell, W. E.
Tyrer, R. G.	Sutcliffe, T. W.

(b) Design for a Hostel for 50 Women Students.

Allison, F. W. H.	Cogswell, V. G.
George, G. W. H.	Gunston, E. L.
Jenson, A. G.	Kirby, E.
Knewstubb, F. W.	Minty, R. J. H.
Palmer, K.	Shroff, L. F.

Designs for various other subjects submitted by the following students have also been approved :—

Alward, W. W. (2)	Andrews, C. D. (2)
Angus, A. E. (3)	Beasley, A. (2)
Blakeley, T.	Bowring, J. V. (2)
Bramwell, J. (2)	Crowther, J. H. (2)
Griffith, H. N. (3)	Haswell, P. B. (4)
Hines, E. G.	Jones, T. L.
Killender, H. C. (2)	Killender, S. C. (2)
Martin, N. (2)	Pritchard, H. W. (3)
Riddell, W. B.	Ryle, Miss W.
Slater, C. (2)	Thompson, C. C.
Townsend, A. C. (2)	Walker, I. (2)
Winn, T. J. R.	

R.I.B.A. CERTIFICATE BOOK.

The Practice Committee have for some time past had in hand the preparation of a certificate book for use by architects belonging to the Institute. The book will be ready for sale in the course of the next few weeks, and a more detailed note regarding it will appear in the next issue of the JOURNAL. The price will be 8s. 6d.

COMPETITIONS

PAISLEY WAR MEMORIAL.

Notification has been received that the last date for sending in plans has been extended to 27th December.

Obituary

MR. FRANK GATLEY BRIGGS.

Mr. Briggs (who was elected a *Fellow* in 1900) was articled to Mr. Thomas Clarke, of Liverpool. On the completion of his articles he remained with Mr. Clarke as his chief assistant until he joined Mr. Westenholme, of Blackburn, in partnership. Amongst his works in partnership with Mr. Westenholme were the new offices of the Mersey Dock and Harbour Board, Liverpool. Mr. Thornley, who was joint-architect in this work, subsequently joined the firm which, on the retirement of Mr. Westenholme, was carried on under the title of Briggs & Thornley. The many competitions in which Messrs. Briggs & Thornley were successful included the Blue Coat School, Liverpool, Wallasey Town Hall, Stepney Town Hall, Arts Buildings, Liverpool University, Elder Dempster offices, Liverpool, &c.

MR. JOHN PARKER.

Mr. John Parker (elected a *Fellow* in 1902), who died at Cape Town on 16th September, was born at Greenock on 17th September 1866. He was educated in Glasgow, but left his native country for South Africa in 1883. He started practice in Cape Town in partnership with Mr. Forsyth in 1890, the partnership continuing until his death. Mr. Parker was President of the Institute of Cape Architects, and occupied a prominent position in the municipal life of the city. He was chosen as the first Mayor of greater Cape Town, a position which he held with distinction for two years.

CONNON: JOHN WREGHITT, of Leeds, elected a *Fellow* in 1881.

BARGMAN: FREDERICK, of Woking, elected a *Licentiate* in 1911.

GOLDIE: EDWARD, elected a *Fellow* 1904.

BROWN: FLINT, elected a *Licentiate* in 1911.

Allied Societies

MANCHESTER SOCIETY OF ARCHITECTS.

Mr. A. W. HENNINGS [F], in his presidential address at the opening meeting of the session of the Manchester Society of Architects, on the 26th October, after referring to the coal strike, said:

"How long the effects of this crowning disaster are likely to last is very problematical, for I am assured by an ironfounder that his particular trade has not recovered from the long strike of the moulders in 1919. When you consider that scarcely any material can be either procured or made without the use of coal, you will see that, while the present conditions of the collieries continue, there is very little chance of the prices of many materials being substantially reduced by English manufacturers to anything like the level of 1914. Further, the prices of all commodities and food will be at a high level until coal is cheaper; and wages, the other important factors in building operations, will continue to be high.

"With the number of architects that there are in practice in our immediate district it is quite evident that if we depended upon necessity alone there would not be enough work to go

round, and it is only what one might describe under present conditions as luxury buildings that enable us to keep going; for I am afraid that until the time comes when no man is allowed to practise without a degree of some sort, or to build without employing a duly qualified architect, we must to a certain extent consider ourselves in great part as luxuries, and you know that in a time of stress luxuries are the first thing that we seek to do without.

"How far will the present University Degree and Diploma Courses affect our profession in giving a steady flow of new architects? There is no doubt more are turned out every year than go out of practice by retirement or death—in fact in this case we may say the architectural birth rate exceeds the death rate to a great extent, with a consequent increase of the architectural population, and this is a subject that may well give us pause to think seriously whether we are helping to make the way too easy for new men to enter the profession.

"I find by comparing the fees at various teaching centres that there is a very great disparity in charges. Thus Manchester used to be 15 guineas per year, but has recently been increased to 30 guineas, and therefore a three years' course comes to 90 guineas, plus the ordinary University registration fees. King's College, London, charges 60 guineas, the Architectural Association 45, Liverpool 45, and you see here the difference between London and Manchester of just double, whilst the others are about the mean between the two. If we compare these figures with the ordinary pupilage premiums it will be seen that they are lower than any architect could afford to take and give his pupils a thorough grounding.

"My own experience for the past 36 years is 14 pupils, and I suppose that is not very far from the average number. Some practitioners, we know, get a reputation for turning out good pupils and have more; others have very few, and possibly my own figure is that of the average man. I have taken the trouble to go into the after history of these 14 pupils, and find that two are dead, six have dropped out—some as soon as their pupilage was finished and others in the course of a few years, as they did not see their way to getting into practice—leaving six only in the profession, and as these have to be divided between myself and partner you will see that the personal output is one-twelfth of an architect per annum. The total number of Fellows in our Society is 125, and giving each one this proportion of a pupil their total output in the past would be about ten per year. How does this compare with the numbers that are turned out from the Architectural School at the University? I fancy that the number is much greater, but I do not wish to press these statistics as being correct, as the only way to get a really reliable comparison would be to circularise members and tabulate their experience."

Mr. Hennings, referring to modern architectural education, said:

"The danger that I see about it all is that the imaginative side is being given undue importance to the neglect of the practical side, and however clever a man may be in turning out some highly imaginative design, let me tell you that a client will never forgive a practical mistake. The sacrifice of utility to symmetry, a smoky chimney, or some other little annoyance due to the want of cultivating the practical side may lose you a valuable client.

"Leaving the subject of architectural education, we naturally come to the matters that affect us in what might be called the bread-and-butter necessities of men in practice, and there is no getting away from the fact that at present these are as bad as they possibly can be; indeed, short of actual extinction, you can hardly imagine a worse state of affairs.

"Cannot we as a body bring some pressure to bear on the manufacturers to show them that we are quite alive to the big profits that are being made in this direction? Surely publicity will form a strong body of public opinion that would affect this question. Take one material—bricks.

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"Can the present price of bricks be justified at an ordinary percentage of profit? A brickmaker informs me that before the war it cost him 13s. per thousand to produce the bricks and that he sold at 18s. at the kiln. If you like to take the clay, at three times the cost that it was before the war because of the extra cost of labour and low production, and double the cost of the coal because that has gone up, you will arrive at from 45s. to 50s. a thousand at the kiln, and you know very well we are paying now from 80s. to 85s. Is not the profit an undue one—a price extorted from the many by the few, and naturally a terrible drag on any business? Is not this a chance for publicity? We don't want Government control—we've had enough of that—and shall have to trust to a strong public opinion. If you look at the matter in this light, not only as regards bricks but other materials, you can see that we are not so helpless as we thought we were, and that a combination of opinion could be made just as strong and effective as a combination of manufacturers or merchants.

"It is not astonishing that the Housing Scheme has broken down so badly when you think that brickwork which used to be done in this neighbourhood at 4s. per yard super, 9 inches thick, was quoted as high as 27s. What possible chance could there be of producing the required cottages at anything like an economic rent? Why bricks should keep up when other materials are coming down is, to my thinking, a question of rings. Steel joists have dropped from £26 per ton to £10, timber is on the down grade, but in these matters there is foreign competition, and necessity has brought the merchants into a more reasonable frame of mind.

"Another matter where I think we can help ourselves is in the matter of architectural work undertaken by various trade firms. Surely it would have a good effect if, through the Institute and all the Allied Societies, we let these firms know pretty plainly that we should not in any case send our quantities or specifications to them for a price unless they stopped doing work independently of us. We know very well how it is done. After we have trained a pupil and he becomes an assistant the firms get hold of one and call his room their architectural department.

"Perhaps when speaking of furnishing firms there ought to be included firms of estate agents who do the same thing. It is a great evil, and one that should make us put our shoulders to the wheel in regard to registration. Such firms will be given the alternative of dropping their house letting and auction sales if they are going to be architects, or dropping their architecture if they can do better with house letting. In this case we must make a difference between the trained man who is an estate agent in the best sense of the term.

"Still, if we pull together as an Association in unity with the Institute and all the Allied Societies we shall in our generation help to put our loved profession on a sure foundation."

NOTTINGHAM AND DERBY ARCHITECTURAL SOCIETY.

The opening meeting of the session was held at 64, St. James Street, Nottingham, last Tuesday, 25th October, at which the President, Mr. Arthur Eaton, M.S.A., of Derby, delivered his Presidential Address. After referring to the activities of the Society, he said—

One question which is at the present time engaging more or less the attention of practically every member of our profession is that of Unification and Registration. This is a subject which if carried to a successful issue will have great results in the future.

It is probably within the knowledge of all present that in May last the Unification and Registration Committee of the R.I.B.A. met together with members of the allied societies and also the Society of Architects, and agreed on the broad principles of a scheme for bringing all architects of the United Kingdom into membership of the Institute. The details of the scheme were then referred to a sub-committee to work out, and in the mean-

time the R.I.B.A. are negotiating with the Society of Architects on various points referring to the scheme, and I believe some progress has been made, but it does not appear that anything definite has been accomplished at present.

Under the scheme as proposed, unification is to be accomplished first, and then followed by some form of registration. Unfortunately this does not meet the wishes of all, as in the meantime some members of the Institute have put their names to an appeal for reversing the order of procedure. They seem to fear that the door of the Institute may be opened too widely to meet with their approval. I cannot myself see that there would be any material difference in the ultimate results in case either procedure is carried through, but as the Unification Committee's scheme is the outcome of an agreement between representatives of all the bodies immediately concerned, it seems to me that nothing should be done which will prejudice the further deliberations of the Committee, and that we should keep an open mind upon the subject until the final report of the Committee is submitted to the constituent bodies. It is impossible in a scheme of this magnitude to attempt to reconcile all our individual opinions, and what we have to do if our personal views on the points of detail do not coincide with those of the Committee, is, in the interests of architecture and the profession, to look beyond our own personal affairs and try and visualise what such a scheme of unification will mean in the future.

I think the day is past for any argument on the question of registration; the necessity for it is apparent, and generally, I think, admitted; and the only argument permissible is on the method by which it can most quickly be brought into operation. In the appointed Unification Committee we have the machinery which is already at work in that direction and only requires the support of the members of the profession to achieve success.

With regard to the position of the building industry, some important and suggestive developments appear to be taking place which I hope will lead, if not to a settlement of all outstanding difficulties, yet to a state of affairs more stable than we have had for a considerable time, an indication that both employers and operatives are more anxious to pull together for the good of the industry and the whole community.

Increased output in the building industry is not the only requisite necessary to reduce cost, but it will do something, and even go a long way; it will certainly increase the volume of work, and do much to remove the fear of unemployment. It will help to maintain a higher wage than would otherwise be possible. In my opinion some system of payment by results, or bonus on increased efforts, must be agreed to, based upon a guaranteed minimum wage: I cannot understand the reluctance of the operatives to agree to some system of this kind, which would provide a living wage to a slow workman and an incentive to a quicker or more ambitious one. Such proposals, however, have not found favour, but I am not without hope that there will be a change of opinion amongst the leaders of the operatives which will be more in harmony with the spirit of the operatives themselves.

The preparation of any bonus system must be a matter for national agreement by employers and operatives, and suitable safeguards must be arranged to prevent men being exploited by unscrupulous employers.

HAMPSHIRE ASSOCIATION OF ARCHITECTS.

The Hampshire Association of Architects has held a meeting at Winchester to meet Mr. Paul Waterhouse, F.R.I.B.A., President of the Royal Institute of British Architects.

Sir WILLIAM PORTAL, Bt., President of the Association, occupied the chair.

Mr. PAUL WATERHOUSE, in the course of his speech, said: As they probably knew, his father's ideas were Gothic: his own idea was to work in the classical as well, and it was his privilege in early days to work on the classical house of Sir Wm. Portal. That was his first opportunity of dealing with that

ancient form of architecture which they knew as classical. Speaking on the subject of education—a question he knew the Hampshire Association to be deeply interested in—Mr. Waterhouse said there was no feature of their work to-day more important. Of the two classes of persons in their profession to whom they of the present generation owed a very great deal in the matter of education, he wanted to put first the Architectural Association of London. Some years ago he was one of a number who formed what was known as the Reconstruction Committee of the Architectural Association. It was then a highly important Society on a large scale, with a definite teaching organisation and paid teachers. There was the beginning of architectural work, and it was so well founded and encouraged that it went on increasing and increasing until to-day they had around them an enormous organisation of education. The other class of persons to whom he wished to allude were the older architects of the last generation. People sometimes forgot how much they owed to the generosity of the men who used to derive some part of their income from the fees of their pupils. They of the present day lost what they gained, but it was quite clear they had something more useful—viz., a systematised college education, which pupils could now get all over the country. The efforts that were being made in that direction were, he thought, most praiseworthy, and there was no doubt that the spread of regular systematic education by professional teachers in architecture, especially if they were themselves not merely schoolmasters, but practical men, must unquestionably be of the greatest possible benefit. What would be the result of this spread of education? It would, he believed, mean that in the future the uneducated man would drop out. It had been possible in the past, through interest or some other reason, for people to come into large practices, and, by the aid of young men, had been able to carry them through. He did not say anything against the man who was a capable controller of a big office. There were a great many architects who had the power of producing in an office directly under their own control work which was really full of their own ideas, but was not their own work. In future the race would be for the swift, and the battle for the strong—a sound education was to be the basis of the architect of the future. That he regarded as being of the highest importance, and no architect could in the coming years afford to neglect his education. He supposed that they already knew of the great advance made with regard to the alteration of architectural education. This had taken place under his Presidency, but not at his suggestion. What had happened was that they had granted, under certain safeguards, not only exemptions from the new examination, but absolute exemption from the final. That meant that a great many young men, perhaps particularly in the North of England and London, would receive their education almost entirely in schools right up to the finish; it meant that not only would they get their education throughout the schools, but that they would not be examined by the Institute in the same way as before. The result would be to encourage the schools, which in their turn, would be under the control of the Institute, because the Institute had a veto on everyone who passed out. So that it would be readily appreciated that a very large network of education had been prepared, and would, he hoped, lead to great things in the future. It might make life more difficult for the young architect by making the approach to his profession harder, but they must face that, because it was one of the necessities of the times. It meant that the architect would have a greater mastery than ever before, and that architects would be looked up to as men of even greater knowledge than many architects possessed at the present time, and the whole body would be respected as specialists. During the war they were looked upon as not being equipped with instruction, such as, for instance, engineers were. A great many unjust things were said about them. Offers of service were made by the Institute to the Government, but they were refused, it was supposed, on those grounds. That was largely

due to ignorance on the part of the Government—and Governments could be ignorant—but it would be a fine thing if they made sure that the architects of the future would be equipped, as they should be, with a knowledge of construction. He was not at all prepared to say an architect should be able to produce a completely equipped building entirely off his own bat. He thought, for instance, in steel construction he would do wisely in consulting a specialist, as often occurred in the medical profession. But life being comparatively short, and it being necessary that one should get their education over at some time in life, it was impossible to be equipped with knowledge of all possible forms of construction as well as design. But he repeated that it was a fine thing that the younger generation were being instructed in construction, which had not happened before. The more important aspect of it was the mastery it would give in the way of design; or, to use the larger word, "architecture." All would agree that the worst building was the one which had no relation to the past. Their work in the past had always been dominated by tradition. In the olden days people were members of some sort of school or guild of builders or designers. If a critic did not know anything about architecture in the past, he had nothing to recognise, and, therefore, nothing to criticise from. Recognition must always be there, and that same recognition must be worked into their own architecture. A man steeped in knowledge of things in the past was able to keep in the way which led to success. It was no slavery. A man was a successful architect because he was true to tradition as a warrior; he was working according to the laws of warfare, and he was a supreme head in himself. In conclusion, Mr. Waterhouse congratulated the Hampshire Association upon having Sir Wm. Portal as their president. As architects they owed more than they could express to those gifted amateurs, men of distinction and position, who had taken the trouble to understand what architecture was all about.

Review

SCOTTISH ARCHITECTURE. *From the 12th to the 17th Century. Vol. I. Part III. [fo. Edinburgh, 1921.]*

The National Art Survey of Scotland is doing excellent service in its publications. Part III., the latest portfolio issued, includes illustrations and descriptions of Argyll Lodging, Stirling, and Cowane's Hospital, Stirling, two typical examples of the picturesque and rugged Scottish architecture of the 17th century.

These houses are very completely illustrated by photographs, with measured drawings of the façades and interiors, and details to a large scale prepared by Professor Ramsay Traquair. The descriptions are lucid and comprehensive, and this part maintains the valuable standard already established.

Architects and others interested in Scottish architecture will appreciate the good work of the Joint Committee of the Board of Trustees for the National Galleries of Scotland and the Institute of Scottish Architects, who are jointly responsible for these publications, and will offer them their congratulations and good wishes.

HERBERT WIGGLESWORTH.

Ancient Monuments and Historical Buildings in the charge of H.M. Office of Works

At the request of the Art Standing Committee, the First Commissioner of H.M. Works has forwarded for the Committee's information a list of ancient monuments and historical buildings which are in charge of the Department, distinguishing between those which are Crown and War Department property and those the guardianship of which has been transferred to the Office of Works under the Ancient Monuments Acts. Ancient monuments which have been scheduled under Section 12 of the Ancient Monuments (Consolidation and Amendment) Act, 1913, are not included.

ENGLAND.	County
Berwick-on-Tweed Town Walls (part)	Berwick-on-Tweed
Deal Castle	Kent
Walmer Castle	"
Carisbrooke Castle	Hampshire (Isle of Wight)
Yarmouth Castle	"
The Brewhouse, Bushy Park	Middlesex
Chelsea Hospital	"
The Chapter House and Pyx Chapel, Westminster Abbey.	"
Hampton Court.	"
Lindisfarne Priory	Northumberland
Scarborough Castle	Yorkshire

SCOTLAND.	
Holyrood Palace	Midlothian
Dumbarton Castle	Dumbartonshire
Elgin Cathedral	Elginshire
Dunfermline Abbey	Fifeshire
Dunfermline Palace	"
St. Andrew's Castle	"
St. Andrew's Cathedral	"
Arbroath Abbey	Forfarshire
The Maison Dieu Chapel, Brechin	"
The Round Tower, Brechin Cathedral	"

(Crown Property.)

Haddington Church	Haddingtonshire
Beaulieu Priory	Inverness-shire
Dundrennan Abbey	Kirkcudbrightshire
Linlithgow Palace	Linlithgowshire
Dunblane Cathedral	Perthshire
Glasgow Cathedral	Renfrewshire
Fortrose Cathedral	Ross-shire

WALES.

Carnarvon Castle	Carnarvonshire
Denbigh Castle and Burgess Gate	Denbighshire
Harlech Castle	Merionethshire
Tintern Abbey	Monmouthshire

WAR OFFICE BUILDINGS.

Wholly or partly in charge of H.M. Office of Works.

Berwick-on-Tweed Town Walls.	St. Catherine's Castle, Fowey.
Blackness Castle.	St. James's Gate, Portsmouth.
Broughty Castle.	St. John's Abbey Gate, Colchester.
Carlisle Castle.	St. Mawe's Castle, Falmouth.
Chester Castle.	Stirling Castle.
Citadel Gate, Plymouth.	The Chantry, New Taver Fort, Gravesend.
Dartmouth Castle.	The Gateway, Tilbury Fort.
Dover Castle.	Tower of London.
Edinburgh Castle.	Tynemouth Priory.
Landport Gate, Portsmouth.	Vale Castle, Guernsey.
Ludgershall Castle.	Weedon Pavilions.
Monmouth Castle.	York Castle.
Pendennis Castle.	
Portland Castle.	

GUARDIANSHIP.

MONUMENTS PLACED IN CHARGE OF THE COMMISSIONERS UNDER THE PROVISIONS OF THE ACT.

* Indicates monuments gifted to the nation (Section 2 of the Act).

ENGLAND.	County.
Fragments of the Edwardian Walls at Berwick-on-Tweed	Berwick-on-Tweed
The stone circle on Castle Rigg, Keswick	Cumberland
Penrith Castle	"
The earthen ring and stone circle known as Arborlow and the tumulus of Gib Hill	Derbyshire
The tumulus and circle on Eyam Moor	"
Hob Hurst's House, West Moor	"
The stone circle known as The Nine Ladies, Stanton Moor	"
The stone circle at Kingston Russell	Dorsetshire
Maiden Castle, Dorchester	"
The Nine Stones, Winterbourne Abbas	"
Finchale Priory	Durham
St. Botolph's Priory Church, Colchester.	Essex
The tumulus at Uley	Gloucestershire
The Roman Villa at Whitecomb	"
Arthur's Stone, Dorstone	Herefordshire
Goodrich Castle	"
Kit's Cory House, Aylesford	Kent
Little Kit's Cory House, Aylesford	"
Richborough Castle	"
St. Augustine's Cross, Ebbfleet	"
Kirby Muxloe Castle	Leicestershire
Jewry Wall, Leicester.	"
The Eleanor Cross, Geddington	Northamptonshire
Mattersey Priory	Nottinghamshire
The Rollright Stones, near Little Rollright	Oxfordshire

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County.		County.	
Langley Chapel, Acton Burnell	Shropshire	Eynhallow Church	Orkney
The stone circle known as Mitchell's Fold	"	The earth-house known as the Gallery	"
The Abbot's Fish House, Meare	Somersetshire	Grave at Grain, near Kirkwall	"
Farleigh Castle	"	The Bishop's Palace, Kirkwall	"
The circles, avenues and cove stones at Stanton Drew	"	The Earl's Palace, Kirkwall	"
The Long Barrow at Stoney Littleton, Wellow	"	The chambered mound of Maeshowe, at Stennis	"
Framlingham Castle	Suffolk	Noltland Castle, Westray	"
Arthur's Round Table, Penrith	Westmorland	Old Church on West side, Westray	"
Brough Castle	"	Pierowall Church, Westray	"
Mayborough, near Penrith	"	The Ring of Brogar and other stones at Stennis, and the neighbouring stones	"
Old Sarum	Wiltshire	Huntingtower or Ruthven Castle	Perthshire
Silbury Hill	"	Newark Castle, Port Glasgow	Renfrewshire
*Stonehenge	"	The stones at Callernish	Ross-shire
The long barrow at West Kennett, near Marlborough	"	The broch at Carloway	"
Clifford's Tower, York Castle	Yorkshire	Jedburgh Abbey	Roxburghshire
Richmond Castle	"	Kelso Abbey	"
Rievaulx Abbey	"	Melrose Abbey	"
The Roman Road on Wheeldale Moor, Goathland	"	The broch of Clickamin, near Lerwick	Shetland
Skipsea Brough (part of)	"	The broch at Mousa	"
Whitby Abbey	"	Scalloway Castle	"
SCOTLAND.		Cambuskenneth Abbey	Stirlingshire
The sculptured stones in Dyce Church-yard	Aberdeenshire	"Mar's Wark," Stirling	"
Kinkell Church	"	The Old Bridge, Stirling	"
The ruined transepts, St. Machar's Old Cathedral	"	The semicircular earthwork at Barsalloch	Wigtownshire
Crossraguel Abbey	Ayrshire	The standing stone at Blairbui known as the Wren's Egg	"
*Dryburgh Abbey	Berwickshire	The mote hill at Druchttag	"
The circular walled structures called "Edin's Hall" on Cockburn Law	"	The cup-marked rock and standing stones, Drumtroddan	"
The gravestones of Fair Helen and Adam Fleming at Kirkconnel	"	The carved and inscribed stones at Kirk-madrine	"
Merkland Cross, Woodhouse, near Ecclefechan	Dumfriesshire	Two stones with incised crosses, on a mound at Lagganairn	"
The Cross at Ruthwell	"	The rectangular camp at Rispaig	"
Blackfriars Chapel, St. Andrews	Fife	Whithorn Priory Church	"
Culross Abbey	"	The sculptured stones in Whithorn Priory	"
Dogton Stone	"	The inscribed slab formerly standing on the roadside leading from Wigtown to Whithorn, but now in Whithorn Priory	"
The cross stone in Aberlemno Church-yard	Forfarshire	St. Ninian's Cave, Whithorn	"
The sculptured stones on Flemingston Farm, Aberlemno	"	St. Ninian's Chapel of the Isle, Whithorn	"
Affleck Castle	"	WALES.	
The Abbot's House, the Abbey Pend, the Regality Tower, etc., at Arbroath Abbey	"	The dolmen at Bodowyr	Anglesey
The hill forts called the "Black and White Caterthuns"	"	The dolmen at Din Dryfol	"
The sculptured stones at Eassie	"	The dolmen at Lligwy	"
Restenneth Priory	"	The dolmens at Presaddfed	"
Dunglass Chapel	Haddingtonshire	The dolmen at Trefignath with the standing stone on Ty Mawr Farm	"
St. Martin's Church, Haddington	"	The dolmen at Ty Newydd	"
The upper and lower brochs of Glenelg	Inverness-shire	The earthwork known as Caer Leb	"
Rodel St. Clement's Church, Harris	"	The earthwork known as Castell Bryn-gwyn	"
Urquhart Castle	"	The hut circles on Holyhead Mountain (Cyttiau'r Gwyddelod)	"
Burleigh Castle	Kinross-shire	The standing stones at Penrhos Feilw	"
Carluith Castle	Kirkcudbrightshire	The standing stones at Tregwehelydd	"
McClellan's Castle, Kirkcudbright	"	The walled camp known as Caer-y-Twr on Holyhead Mountain	"
Orchardton Tower	"	Carnarvon Town Wall (part), Puleston, and Bell Towers	Carnarvonshire
Threave Castle	"	Flint Castle	Flintshire
The Eagle Rock, Cramond	Linlithgowshire	The sculptured stones and crosses at Margam and Kenfig	Glamorganshire
The Dwarfie Stone, Hoy	Orkney	Weobley Castle, Gower	"
Egilsay Church	"	The dolmen at Pentre Evan	Pembrokeshire

Notices

BUSINESS MEETING, 5TH DECEMBER, 1921.

An election of members will take place at the Business General Meeting, Monday, 5th December. The names and addresses of the candidates (with the names of their proposers), found by the Council to be eligible and qualified for membership according to the Charter and By-laws and recommended by them for election, are as follows:—

AS FELLOWS (15).

- BARNISH**: LEONARD [A. 1911], Royal Liver Building, Liverpool, and 14 Fairview Road, Oxtou, Birkenhead. Proposed by Hastwell Grayson, Arnold Thorneley, Professor S. D. Adshead.
- BEAUMONT**: WILLIAM SOMERVILLE [A. 1905], 24 Brazennose Street, Manchester, and Beech Mount, Barrington Road, Altrincham, Cheshire. Proposed by Percy S. Worthington, Isaac Taylor, A. W. Hennings.
- BIDDULPH-PINCHARD**: CHARLES HENRY [A. 1921], 9 Staple Inn, High Holborn, W.C.2, and Eghams Close, Beaconsfield, Bucks. Proposed by Louis Ambler, F.S.A., W. A. Forsyth, James J. S. Naylor.
- BOND**, ALEXANDER GODOLPHIN, B.A.Oxon. [A. 1897], 115 Gower Street, London, W.C.1, and 22 Priory Road, West Hampstead, N.W.6. Proposed by Ernest B. Glanfield, Percival M. Fraser, John Hunt.
- DAHL**: JOHN LOVE SEATON [A. 1909], Radnor Chambers, Folkestone, and 23 Edward Road, Bromley, Kent. Proposed by Edward Warren, F.S.A., Basil Oliver, Briant A. Poulter.
- DADNEY**, CHARLES ARCHIBALD, F.S.I. [A. 1900], Bank Chambers, Tower Bridge, S.E.1, and 302 Brownhill Road, Catford, S.E. Proposed by H. D. Searles-Wood, W. E. Riley, Arthur G. Leighton.
- DAVIDGE**: WILLIAM ROBERT [A. 1904], 27, Abingdon Street, Westminster, and 63 Lewisham Park, S.E. Proposed by Sir Aston Webb, K.C.V.O., C.B., P.R.A., Professor S. D. Adshead, John W. Simpson.
- EVANS**: CHARLES GLYNN [A. 1912], The Croft, Neath, and 13, New Street, Neath. Proposed by Norman G. Bridgman, W. Herbert Hobday, W. James Nash.
- GOURLAY**, CHARLES, B.Sc., F.S.A.Scot. [A. 1887], Professor of Architecture, Royal Technical College, Glasgow, and Coniston, Milngavie, near Glasgow. Proposed by Wm. B. Whitie, Alex. N. Paterson, A.R.S.A., John Keppie, A.R.S.A.
- HAMP**, STANLEY HINGE [A. 1900], 20 Red Lion Square, London, W.C.1, and 6 Edwardes Square, Kensington, W.8. Proposed by Thos. E. Colcutt, John W. Simpson, Sir Edwin L. Lutyens, R.A.
- RUSSELL**: ROBERT TOR, D.S.O. [A. 1914], P.W.D., Ruisini, Delhi, India. Proposed by S. B. Russell, Herbert Baker, Sir Edwin L. Lutyens, R.A.
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- WATKINS**: WILLIAM GREGORY [A. 1893], St. Edmond's Chambers, Silver Street, Lincoln, and 20 Wragby Road, Lincoln. Proposed by Arthur Nelson Bromley, Henry V. Ashley, Henry G. Gamble.

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YOUNG: CEDRIC JOHN MATHISON, M.C. [Special War Examination], 42 Tully Street, Perth, Scotland. Proposed by Sir John J. Burnet, R.S.A., P. H. Thomas, Wm. B. White.

YOUNG: FREDERIC NEWALL [Special War Examination], Works Department, Messrs. Butterfield and Swire, Hong Kong. Proposed by Charles E. Varndell, Robert Atkinson, E. Stanley Hall.

Members' Column

Members, Licentiates and Students may insert announcements and make known their requirements in this column without charge. Communications must be addressed to the Editor, and be accompanied by the full name and address. Where anonymity is desired, box numbers will be given and answers forwarded.

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Lic.R.I.B.A., at present employed as assistant in a Government Department Housing Section (disengaged shortly owing to reduction of staff) seeks engagement, in or near London preferably. Fifteen years' varied experience at home and abroad. Moderate salary. Excellent references.—Apply Box 891, c/o Secretary, R.I.B.A.

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Minutes I.

At the First General Meeting (Ordinary) of the Session 1921-22, held on Monday, 7th November 1921, at 8.30 p.m.—Present: Mr. Paul Waterhouse, *President*, in the Chair; 72 Fellows (including 24 members of the Council), 40 Associates (including 7 members of the Council), 8 Licentiates, 1 Hon. Fellow, 3 Hon. Associates, and a large number of visitors—the Minutes of the meeting held on 4th July were taken as read and signed as correct.

The Secretary announced that the Council had nominated for election on 5th December 15 candidates for the Fellowship, 111 candidates for the Associateship. The names of these gentlemen, having been published in the JOURNAL, were taken as read. (See pp 29-31.)

The President delivered the Inaugural Address of the Session.

On the motion of the Right Hon. Lord Sumner of Ibsstone, seconded by Sir Henry Newbolt, a Vote of Thanks to the President was passed by acclamation.

The President having briefly expressed his acknowledgments, the meeting closed at 9.45 p.m.

At the conclusion of the Ordinary General Meeting, the visitors having retired, a Special General Meeting was held, and, on the motion of the President, seconded by the Hon. Secretary, the following Resolutions were unanimously passed:

EXTENSION OF PREMISES.—A. That the purchase for the sum of £11,000 of the Lease (perpetually renewable) of No. 10 Conduit Street, W., be hereby confirmed.

B. That the Council be authorised to create a mortgage on or otherwise to charge No. 10 Conduit Street and the other leasehold and freehold property of the Institute (subject to the existing mortgage) as the Council shall think fit to secure the further sum of £10,000 and interest and to execute such deeds and documents as may be required in connection therewith.

AMENDMENT OF BY-LAWS RELATING TO HON. ASSOCIATES.—

C. That effect be given to the resolution of the General Body passed on 28th February 1921—viz., that the number of members in the Honorary Associate class shall not exceed sixty; that the entrance fees and annual subscriptions of Honorary Associates be abolished, and their privilege of voting in the election of Council and Standing Committees be withdrawn.

D. That the following provision be added to By-law 4: "The number of members in the Class of Honorary Associates must not exceed sixty."

E. That clause (c) in By-law 17, which provides for the payment by Honorary Associates of entrance fees and annual subscriptions, be deleted.

F. That the following words be added to By-law 63: "or in the election of the Council and Standing Committees."

G. That By-law 16, which provides for the transfer of a Fellow who has retired from practice to the Class of Honorary Associates, be deleted.

The Hon. Secretary then gave notice that a further General Meeting would be held at 9 Conduit Street, W., on the 21st November, at the conclusion of the Ordinary General Meeting on that day, when a report would be furnished of the Proceedings at the General Meeting to be held on the 7th day of November, and the above-named resolutions would be submitted for confirmation.

The Special General Meeting closed at 9.55 p.m.

R.I.B.A. JOURNAL.

Dates of Publication.—1921: 12th, 26th November; 10th, 24th December. 1922: 14th, 28th January; 11th, 25th February; 11th, 25th March; 8th, 22nd April; 6th, 20th May; 3rd, 17th June; 15th July; 19th August; 23rd September; 21st October.



ILKESTON SECONDARY SCHOOL. VIEW FROM SOUTH-EAST.
G. H. Widdows [F.], Architect.

School Design

By GEORGE H. WIDDOWS [F.].

WHEN the Council did me the honour to ask me to read a paper on schools I found it difficult to decide in what way the matter should be treated, as everything had already been said prior to the outbreak of the war on present-day methods; and the war has, as far as school buildings are concerned, effectually hindered progress. I therefore made enquiries as to what was expected of me, and was told that I was expected to sum up the past, to deal with the present, and to foretell the future!

This somewhat encyclopædic presentation of the case brought its own light with it and caused one to think; but to deal with the past, present and future in the way that they should be dealt with would stretch beyond the capacity of an evening meeting. I therefore do not purpose dealing in detail with the past history of education and educational buildings. The development of secondary education from the catechetical schools of the second century A.D., brought about by the conflict of Christianity with pagan philosophy, has already been ably dealt with, as also the rise and progress of elementary schools from about the same period.

At first in the Christian era elementary education was given in the home; but after the decline of fervour in Christian families following the Peace of the Church in the reign of Constantine, schools for ordinary education became an acknowledged thing, and were commended by the Council of Vaison in the year 529. Thenceforward there was steady development through the Middle Ages by means of monastic, cathedral and chantry schools on the one side, and guild, hospital and city schools on the other—a system not altogether unlike the dual system of the present day.

Thus far the emphasis was laid on the spiritual training; then came the Renaissance and the Reformation, with the re-foundation of many schools in the reign of Edward VI; and in this period the emphasis was laid on the intellectual training. From that time onward to modern days the development is well known. In the last few years the emphasis appears to have been laid on the physical side; and we, as architects, have been concerned more with this, in endeavouring to express in our buildings a solution of the problems of heating, lighting and ventilation.

The impetus given to school hygiene was undoubtedly brought about by the passing of the 1902 Act. Although this Act, which brought into being our large educational authorities, made no provision for the school medical officer, nevertheless it soon became apparent that this official would look into things and make his presence felt. That much required attention is undoubtedly a fact; and the credit for drawing attention to the unsatisfactory planning of schools must be given to Doctor George Reid, of Staffordshire. He, with Mr. Hutchings, the Staffordshire authority's architect, was the first to break down the bad tradition of the central hall. I think we in Derbyshire may claim to run a close second, and before long nearly all other authorities took up the running.

In the old central-hall type of school one apartment ventilated into another, and the free circulation of pure air was impossible. We know that the central-hall type of plan was developed with the idea of giving the head teacher very little walking exercise. By seating him at a lordly desk, and by providing spy-holes called borrowed lights, the head teacher was converted into a kind of glorified policeman, instead of being, as he should be, a guide, philosopher and friend of children and teachers.

With the abolition of the central hall and the acceptance of the principle of through ventilation one of the greatest revolutions in planning in any kind of building took place, with the result that in 1914, when school building practically stopped, our English schools had obtained a distinctive character which was known the world over; and this character was brought about by adopting common-sense methods in connection with ventilation, lighting and heating.

I now purpose taking these three factors in school planning, and I do not purpose dealing with any others this evening.

If these three factors are mastered, then we have a sound beginning; but to lay down hard and fast laws as to the shape of a school, the arrangement of its rooms, and the kind of apartments, is to stifle initiative, to deaden thought and hinder progress. No two schools, in my mind, ought to be alike. There ought to be special considerations for each school in every district, with special materials suitable for that district, which, when rightly used, should speak of the ideals which ought to govern both the school and the particular neighbourhood in which the school is placed.

VENTILATION.

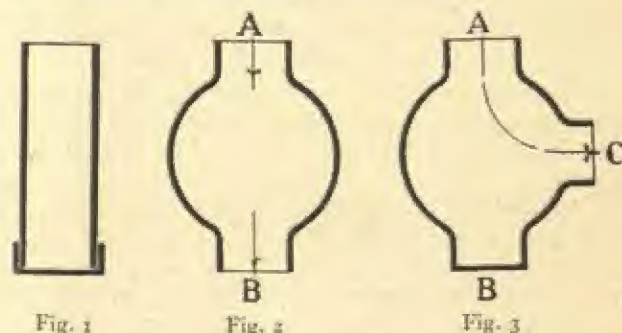
In the matter of ventilation we owe a great deal to Professor Leonard Hill, whose researches and books are so well known. He has entirely exploded old theories. Ventilation is the first essential, and bad ventilation will try both body and brain more quickly than bad lighting or bad heating.

Professor Hill bids us see that the old theory that the primary need of ventilation was to supply oxygen to the lungs is not true, otherwise consumptives would not be sent to the tops of mountains, where the amount of oxygen is less than in the valleys; and that the primary need is to produce skin activity by the carrying away of the heat and moisture of the body.

The second chief thing that we have to bear in mind is that the best form of ventilation is not obtained by bringing in air near the bottom of a room and taking it out through the middle of a ceiling, but is best obtained, and in the simplest manner, by causing air to pass across the room by the agency of wind pressure.

The old theory that there were poisons in expired air is found not to be true; and it is also found that the human body can only absorb a given quantity of carbon-dioxide, and that any excess is not absorbed by the system but thrown off; thus the physical aspect takes the place of the chemical in this matter of ventilation.

The diagrams about to be shown will enable the principles of ventilation to be followed.



The first three figures may be regarded as tubes holding liquids. In the first, while the end is capped the capacity of the tube is limited by its dimensions. If the end be removed, then the capacity of the tube is governed in a great measure by the constancy of supply.

In the second it is the same tube, but bulged in the middle; and in the third the same tube with a

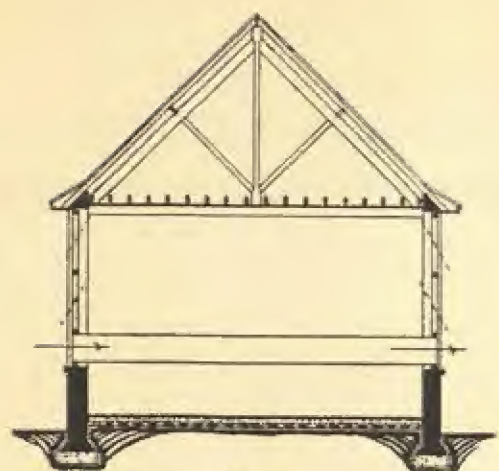


Fig. 4

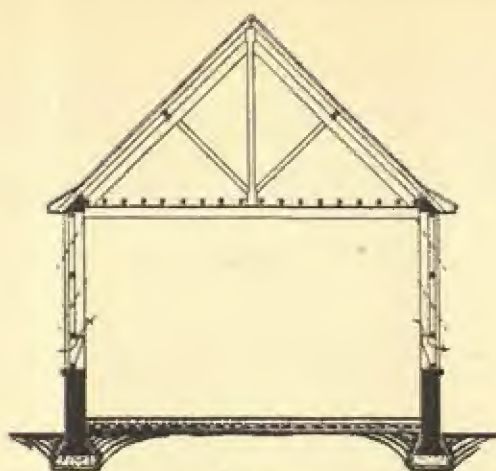


Fig. 5

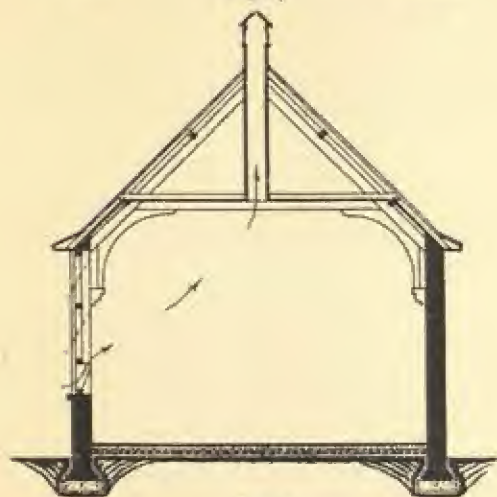


Fig. 7

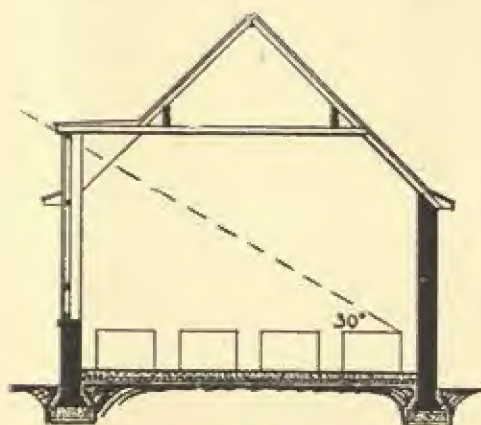


Fig. 9

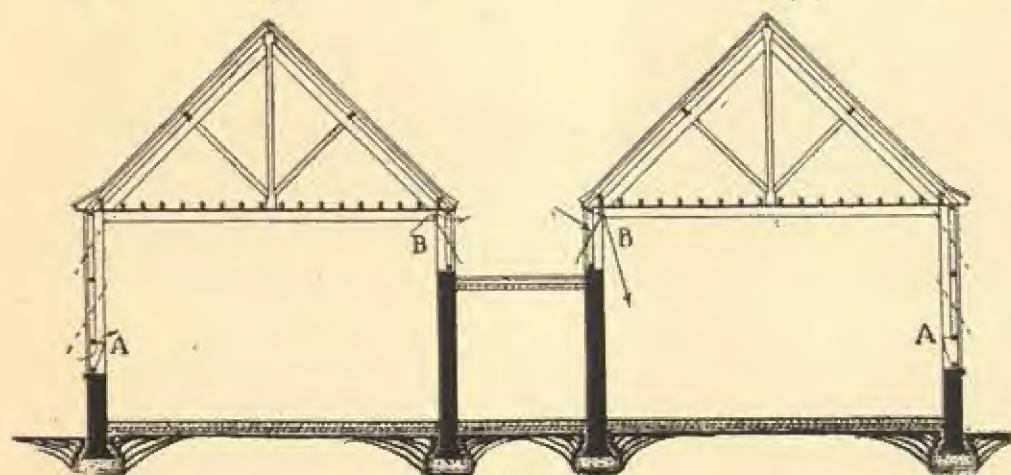


Fig. 8

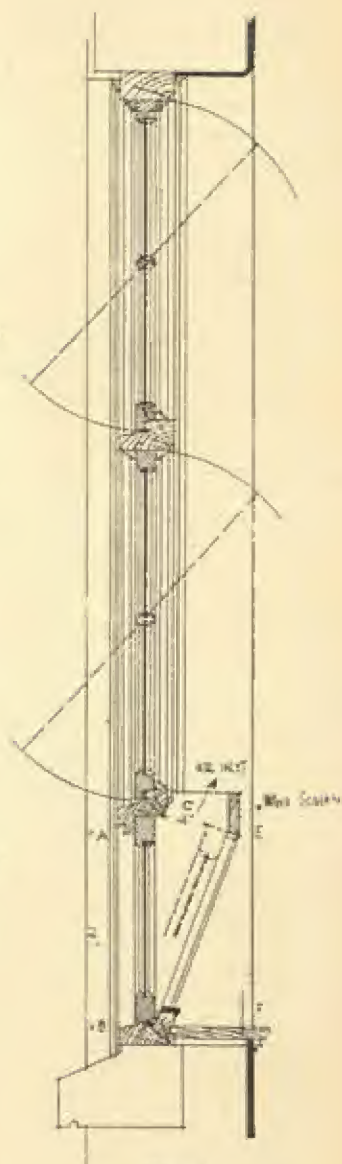


Fig. 6

side outlet instead of a bottom outlet. If these three diagrams be placed horizontally instead of vertically, then we get what we might expect to be the result in the three following diagrams (Figs. 4, 5 and 6) when dealing with air.

In the fourth diagram the hoppers are removed and a wooden tube crosses the room. The amount of air passing through that tube depends in a great measure upon the wind pressure, and corresponds to Fig. 1.

In Fig. 5 the tube is removed, and we have a similar effect to Fig. 2—that is, the air comes in at the hopper, the room is the expanded tube, and the hopper on the far side is the contraction through which the air departs. Given an area at the tops of hoppers of 10 square inches per child for inlet, and a similar area on the other side for outlet, and wind pressure of no more than four miles per hour normal to the face of the building, experiments show that the air in a room is changed ten times per hour by means of hoppers only. All this is accomplished without any mechanism or machinery and in the cheapest possible way, because the ventilator made use of is Nature's own—viz., the wind.

It may be asked as to what effect is produced when the wind is dead end-on, and not normal to the sides. It would appear from smoke experiments that the movement of the wind slightly to right or left sets up a vacuum outside the building, and that then the air is removed, not by propulsion, but by suction.

While dealing with the question of hoppers, I would draw attention to Fig. 6. So many people who design and make hoppers fail at the crucial moment. As the hopper falls inward the vertical height is decreased, and unless something in the nature of a wind screen is provided a horizontal draught passes over the top of the hopper. When we think that the work of a hopper is to cause air to be deflected upwards before entering a building, the failure to provide wind screens is rather remarkable, and yet one is constantly coming across cases where this little point, which is so essential, is overlooked. No hopper should open more than 4 inches in the clear, otherwise air is admitted in large quantities with much discomfort.

For the rest of the window, centre-hung sashes would appear to be the most convenient, the air being deflected across the room in a similar direction to that from the hopper. I have tried double-hung sashes in one case, and in one case only, and

am of opinion that in every way centre-hung sashes are preferable.

In Fig. 7 will be seen the drawbacks of what was known as "ceiling extract ventilation." Provided things were normal and the wind pressure on the side in which the window was placed, then the air might be made to pass as indicated by the arrows, but it left the far side of the room almost untouched. If the wind were on the side of the school opposite to the window, then, of course, there would hardly be any air movement at all. Moreover, this form of ventilation took no account of the difference in temperature and the difference in weight between cold air and warm air, the result being that on a cold day air, instead of passing up the ceiling ventilator, came down it, with much discomfort to staid men with bald heads, and it was more common than not to find these ventilators covered over with brown paper.

In Fig. 8 we see an attempt to get through ventilation and yet have a central corridor. Central corridors are very depressing, and the so-called through ventilation is but little better than the ceiling extract system.

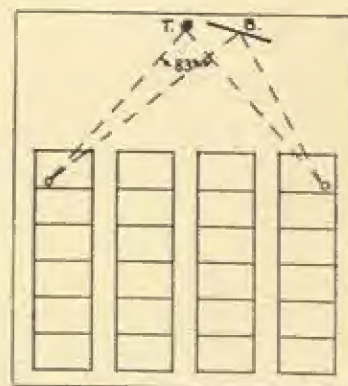
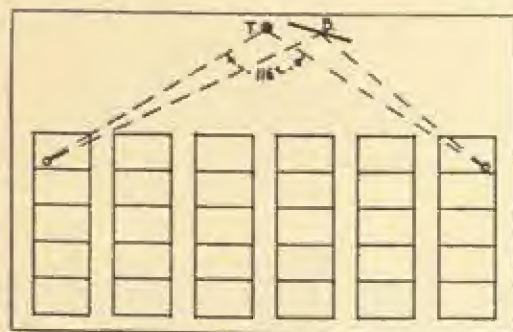
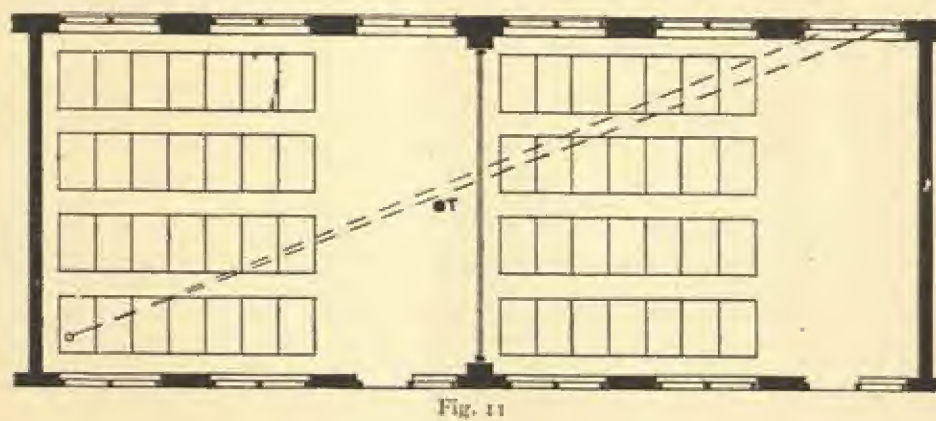
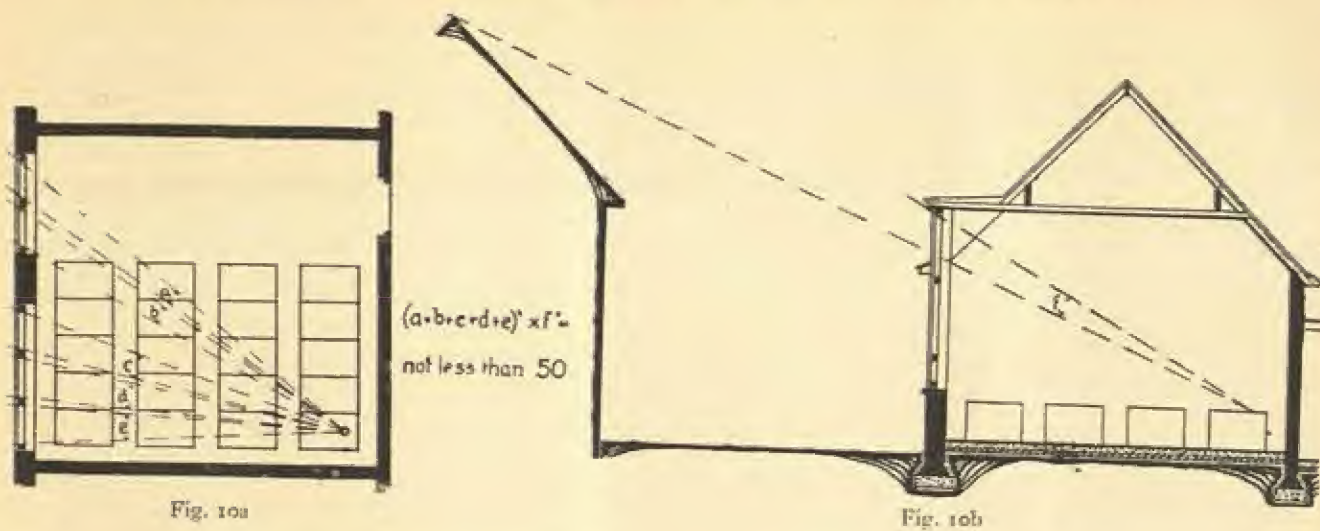
Before leaving the question of ventilation we must remember that bad ventilation is not only bad in that it does not remove the exudations of the body, but also because it allows bacteria to accumulate, and thereby become more dangerous in attack.

Yet another point to be remembered is that the stuffy smell in badly ventilated schools is due to the fact that children are not taught to use sanitary paper. The stench in these rooms is not, as some people imagine, from stale sweat. This should make us see the need for ventilation, especially when we remember that in areas where poverty is rife clothes are often made to serve for two or three persons.

As a last point in ventilation it used to be thought that windows must serve for both lighting and ventilation. At the outbreak of the war two experimental rooms were completed at North Wingfield, where the light was obtained by means of a skylight and the ventilation by means of doors on verandahs. I will draw your attention to this when the slides are placed on the screen in a few moments.

LIGHTING.

The second of the three hygienic principles is lighting, and there are certain facts which need particular attention; and here may I say how much I owe to visits paid by members of the Illuminating



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Engineering Society and the help I have received from them? Especially do I wish to express my thanks to Doctor Kerr, of the London County Council.

Lighting can, of course, be by windows on one, two or three sides of a room; and while scientists agree that unilateral lighting is best, nevertheless it has not yet been shown that other forms of lighting are harmful. A light from the left from above the head is doubtless the most restful, and that is, I think, as far as we can go at present.

Where unilateral lighting is adopted one point to be observed is that a line forming an angle of 30 degrees with the top of the desk farthest from the window should, when projected, pass through the glass area of the window as shown on Fig. 9. Another point is that the glass area in rooms up to 20 or 21 feet in width should be one-fifth of the floor area. If this width is exceeded then the glass area would probably have to be increased to one-fourth or even one-third, but no room should be more than 25 feet wide.

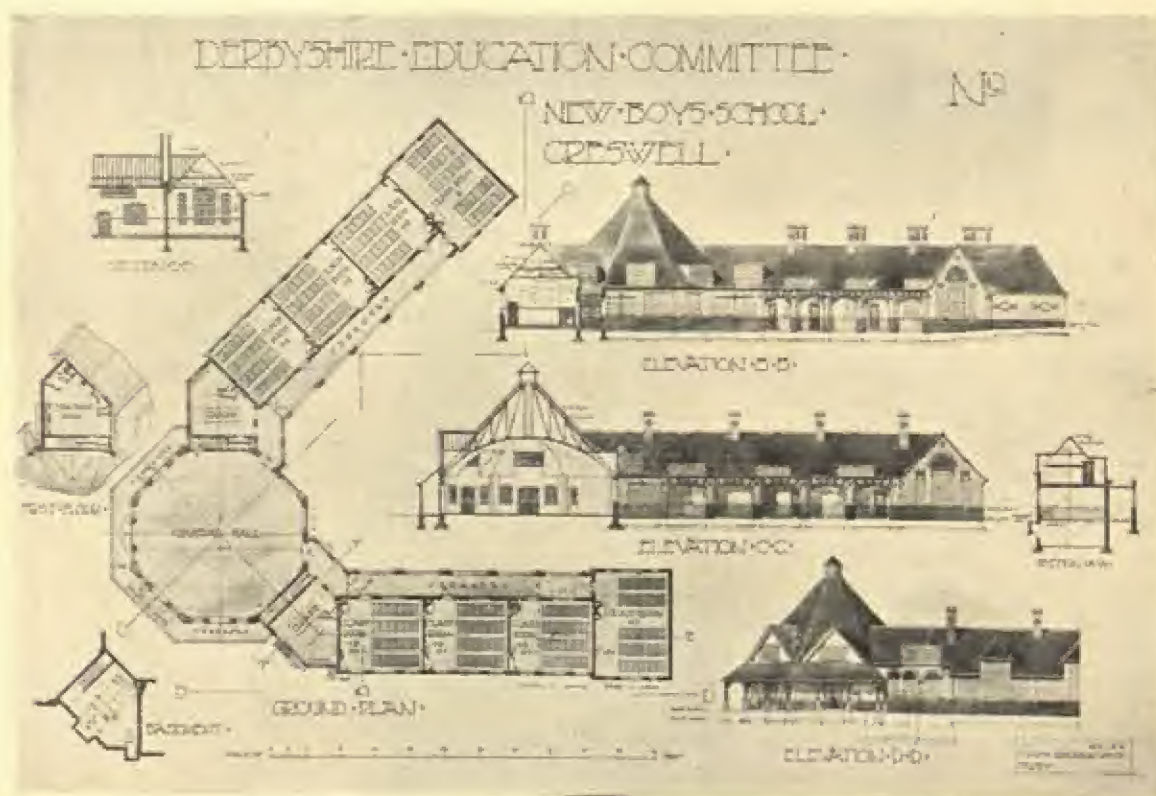
A third point, which refers especially to town areas, is that 50 square degrees of clear sky should

be observable on the desk farthest from the window. This 50 square degrees is obtained by adding together the horizontal angles and multiplying by the vertical angle shown on Figs. 10a and 10b.

Another point in lighting is the undesirability of having movable partitions glazed. Teachers have a strong objection to glazing as it reduces the privacy of a class. Moreover it will be seen from Fig. 11 that a child sitting and looking at a teacher standing in front of a glazed partition may very well have its eyes strained with the light coming from the window of an adjoining room.

No class-rooms should, as a rule, be more than 21 feet in width. The perusal of the two diagrams (Figs. 12 and 13) will explain this. In a wide room the teacher has great difficulty in covering so large an angle of vision as 116 degrees. In an ordinary class-room of 20 feet the angle is reduced to 83 degrees; and what applies to the teacher applies more or less to the children looking at the blackboard.

In a room lighted from one side with a glass area equal to one-fifth of the floor area and without obstruction it is found that 2 per cent. of the sill



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light reaches a point 20 feet away from the sill. This is more than double what is regarded as necessary for good lighting. In the case of North Wingfield, to which reference has already been made, and where the light is by means of an inclined continuous light running the full length of the class-room at an angle of 60 degrees with the horizontal, the lighting at a point 20 feet away is no less than 5·18 per cent. of the light falling upon the window-sill.

One other point in connection with lighting is connected with artificial lighting, and it is interesting to note that the minimum of daylight is the maximum of artificial light. The maximum amount of artificial light falling upon paper or light material is three foot-candles, except in the case of dress-making and manual work, when it should be four foot-candles. For class-room purposes it is found best to have the lights 8 feet 3 inches from the floor, and three candle-power for every 5 square feet of

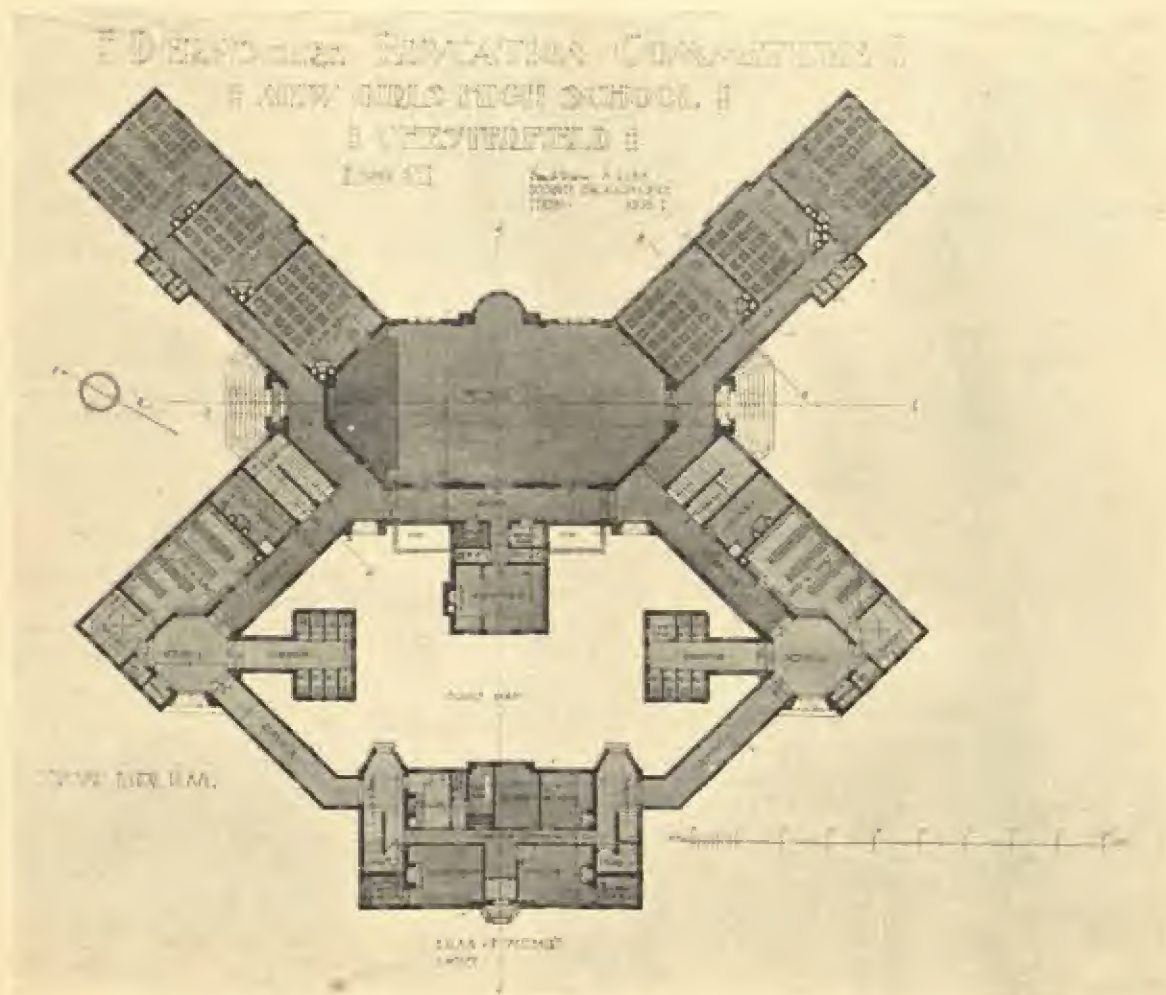
floor space will give approximately three foot-candles at the desk level.

Lights should be fixed so that they cannot be lowered and produce eye strain owing to the presence of too much artificial light. The source of light should always be screened and the best method is probably by means of prismatic glass.

HEATING.

There are various ways of heating schools—grates and stoves are more or less cheerful, but the heating is partial, and soon dissipated when doors are open to admit scholars at the opening of a session. Another method is by means of warm air without propulsion, and this is very unreliable. When assisted by fans with the usual accompaniments the heating becomes deadly monotonous, while the windows, being closed winter and summer, have a very deadening effect.

A steady, deadly uniform heat is a thing to be



avoided. Moreover, in some heating systems the airducts become foul, and a considerable amount of dust finds its way into the building—in fact, one French scientist discovered that such air contained double the amount of matter that the ordinary air contained.

Other methods of heating are high-pressure steam and high-pressure hot water, low-pressure steam and low-pressure hot water; and experience seems to show that of these four the last one is the most serviceable in a school. One of the things that became noticeable with the introduction of better ventilation was the inadequacy of the heating apparatus, usually low-pressure hot water, to be found in our schools. These were usually put in with a guarantee by the engineer that a temperature of 60 degrees would be maintained when the outside air was freezing, but to obtain this every door and window had to be kept shut.

On the assumption that the air should be changed not less than ten times per hour, it will be found that an area of about 35 square feet of heating surface to every 1,000 feet of cubic contents will be required, as the following figures show:—

In a room for 50 children there will, by the Board's regulations, be 7,000 cubic feet of contents, or 70,000 cubic feet of air per hour to be warmed. A British thermal unit will raise 50 cubic feet of air 1 degree in one hour; therefore the B.T.U. required in this room will be $70,000 \times 28 \div 50 = 39,200$ B.T.U. per hour, assuming the outside temperature to be 30 degrees and the required temperature inside 58 degrees, a difference of 28 degrees. A square foot of heating surface will give off 1.75 B.T.U. per hour for each degree (F.) of difference between temperature of pipe and air. If the pipe temperature be 150 degrees there will be a difference of $150 \text{ degrees} - 58 \text{ degrees} = 92 \text{ degrees}$. The area of piping will, therefore, be $39,200 \div 92 \times 1.75 = 244$ square feet. This is equivalent to 35 square feet of heating surface per 1,000 cubic feet of contents. If the rooms have a constant height of 14 feet, and the floor area be 10 square feet for each scholar, this may be regarded as requiring 5 square feet per child—or, in other words, the heating surface required will be one-half of the floor area.

A point to be remembered in connection with heating is that the boiler should always be 50 per cent. above its catalogue efficiency, and that the heating chamber should be capacious so as to enable a large store of fuel to be laid in.

At North Wingfield the heating is by means of steam pipes under a concrete floor composed of slabs $2\frac{1}{2}$ inches thick. Owing to the heating pipes being out of sight the rooms have a much neater appearance and this method of heating is doubtless the best. By keeping the feet warm the blood circulates, and the admission of cool air striking the skin and filling the lungs acts as a tonic.

No great heat is required on the floor surface. A temperature of 75 degrees is more than ample; and this, of course, is much less than the heat which reaches one's feet when sitting in front of a fire.

With these steam heating pipes 1 square foot at 212 degrees will heat a floor area of 2.82 square feet at 75 degrees. The heat above 212 degrees due to steam pressure is set off against the heat lost downwards. While steam has much to recommend it, I am not at all sure that hot water would not be better, as there is less mechanism to get out of order. On the other hand, during holidays, steam pipes not being full of water, there is no fear of fracture by frost.

For those who would wish to carry the matter further I would refer them to the article on school buildings in the *Encyclopædia of Education*, recently published by Messrs. Pitman.

Discussion

The PRESIDENT: We have listened to a most interesting Paper, and we would all like to express our admiration at once; but I will ask Sir Edmund Phipps to be good enough to move a vote of thanks.

Sir EDMUND PHIPPS: May I, Sir, begin by saying how very much we of the Board of Education appreciate the kindness and courtesy of your Council in asking us to come here to-night? It has been so interesting to come and see what we have seen, and to listen to what we have heard, that I have forgotten what it was that I had intended to say! The truth is that Civil Servants are not often allowed to make speeches. Yet I will not pretend I was sorry when I was asked to propose this vote, because, just now, Civil Servants have something to say when they get a chance. As a rule, a Civil Servant cannot say anything in a speech except to apologise for his own existence, and at present he has to remember how much trouble he has given to everybody in the past, and how much expense he is causing them in the present. And yet, you know, gentlemen, times may change. In the past the Board of Education have, in one way and another, done something to encourage school building and make work for architects, and that time may come again. After all, schools are not a fashion; school building is not a thing which is taken up at one time and dropped at another. These schools

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are necessities, and every month that school building is put off, as it has been during the war, the need for schools is rising; and sooner or later we shall have to have all the schools the building of which has been put off since the beginning of the war. So that before very long the time will come when you and we, instead of being in our present relations, will be allies again. I know that at present there is a certain amount of assurance wanted in any member of the Board of Education meeting any body of architects. I do not disguise the fact that I and my colleagues spend much time in preventing you from doing your work in building schools; we are even stepping in and going back upon approvals which we have given in the past, stopping buildings which were on the verge of being begun. And that is extremely distasteful, and I want you to believe that we are really ashamed of ourselves! But we have to do what we are told and what we are paid for, and we are trying to do it while preventing ourselves from losing hope for the future. But when the time comes again we shall be allies in a more real and important way than in the past, because since the last school building went on our whole arrangements with Local Education Authorities, County and Town Councils, have changed. In the old days if we tried to economise in school buildings it was only to prevent extravagance, to prevent the Education Rate being so treated that it had not enough left in it for other purposes. Now, when we are paying our proportion of all Local Authority expenditure, every farthing matters to the Chancellor of the Exchequer; and with the admonitions as to economy which are being put before the world, we are all in the same boat, and we have to see that the rates and taxes are used just as far as is necessary and no further. There may be less supply of money for schools for the rest of our official—perhaps for our natural—lives, and all the money we can save on buildings is not going to be saved, but will be needed for books, equipment or teachers' salaries. We hope that architects, local authorities and the Board of Education will be working together, putting our brains into a common receptacle, as it were, to try to make the money go to the best advantage. I expect we shall not be found fighting each other in the future: we shall be working together to do all we can to make the best of a very limited supply.

The Board of Education did, in their last Building Regulations, just before the war, say they invited experiment. They said their Regulations were built up not on theory, but on the practice of living men. We have taken the best we could, and we have done all we could to learn from it. We say there we welcome new ways of doing things, and we will gladly listen to all you have to tell us. The pleasure with which we have listened to Mr. Widdows to-night is an example of that.

I have spoken too long already, Mr. President, but I

know I can say, on behalf of this meeting, how extremely interested we have been in all Mr. Widdows has said, and how grateful we are—and if I may say from the Board of Education officially—how much interested and gratified we are at having been given a chance of hearing and seeing to-night; we shall try to remember it. It is not for me to enter into the technicalities, of which I know little, but on which, I am told, Mr. Felix Clay will have an opportunity of saying a word.

But I would like to say something about Mr. Widdows personally. He is a very familiar figure in the corridors of the Board and by our fireside; we have met on many occasions; and if there is one thing he has left upon our minds—at all events, upon mine—it is this: that he has been able to—I was going to say get the better of us, but I don't quite mean that—he has been able to get the best out of us, to make the best of us. He is a man of such sympathy that in dealing with the Board he realises that we are not merely hide-bound officials by nature, but that we stand between the Treasury on one side and the Ministry of Health on the other, and there are many allowances which should be, and can be, made for us. He knows how we regard our present job. Mr. Widdows has endeared himself, personally and officially, to the Board and their staff, and it is with peculiar pleasure, Sir, that I stand here to-night to move a vote of thanks to Mr. Widdows, and also to thank you, Sir, and the Council for their kindness and hospitality in giving me the opportunity.

Mr. FELIX CLAY: Mr. President, ladies and gentlemen, I have great pleasure in seconding the vote of thanks to Mr. Widdows for the extraordinarily interesting paper we have heard. And I am particularly glad to do so in order to have the opportunity of testifying to the extraordinary amount of work which Mr. Widdows has done towards the development of the modern school plan. I have seen the plans at least of all Mr. Widdows' schools, and many of his buildings, and, incidentally, a good many others besides. No architect has done more than he has to develop the modern school. When we get at the Board plans by Mr. Widdows, they invariably give us something to think about, something to talk about, and, almost invariably, something to argue about. Yet, somehow, the building is generally put up very much in the form originally designed.

School planning had, as Mr. Widdows has said, an extraordinary development in the ten years just before the war; up till that time it had been comparatively stable. I do not know whether you realise it, but it is half a century—this year—since the first central-hall school was built. The London School Board, in 1870, promoted a competition to try to get a satisfactory plan for an elementary school. It was won by Roger Smith; and in 1872 the "Ben Jonson" school was erected. It was simply a central-hall school, with class-

rooms on three sides opening out of the hall, and it was thought at the time to be very unsatisfactory. The reasons were that they did not like having a number of class-rooms; it was expensive in staffing, and they did not like having too many children in one building. They also thought the hall was a waste of space. Therefore they went back to the old pupil teacher system of plan; that is to say, a long narrow room, where there can be a number of classes under the supervision of one head teacher. The pressure for separate class-rooms grew, and in ten years they came back to the separate class-room plan and hall, because they wanted some place to collect the children in.

In 1882 the School Board passed a resolution that no school should be built in future without a central hall, and ten years afterwards the "Ben Jonson" type was again adopted and became the standard type; it was regarded as practically the last word in school planning. Changes were made in small matters of detail, such as the stair-cases, cloakrooms and so on; but the main lines were continued until 1904, and we all thought it was the best thing to be done to secure supervision and compactness. Then it was that Dr. Reid, Medical Officer of Health for Staffs after the 1902 Act, was asked to look at the plans of schools, and he took strong exception to the central-hall plan, chiefly on the score of ventilation. And he worked out a plan, with Mr. Hutchings, and sent it to us at the Board. It consisted of a row of class-rooms, with windows on both sides, and a separate hall in the playground. We were very much astonished to get such a plan. Dr. Reid came to the Board, and we argued about it a long time. We thought cross-lighting would be unsatisfactory. But a school was built as planned, very much as an experiment, and a year afterwards I went to look at it. I chose the winter time so that I might see how the ventilation was working. It was a cold day in February, and there was some snow. It was remarkable that when I walked into a class-room from the fresh air outside—which is a very good test of ventilation—there was no smell, that school smell which is known to all who are in schools much. Yet there was no draught to speak of, and the headmaster was absolutely enthusiastic about the school. He said that in his old school, at Darlaston, he was about to give up his work; he finished every day very tired and with a splitting headache, but now he felt at the end of the day as fresh as at the beginning. I noticed the absence of that chorus of coughs and sneezing and snuffling which seems to greet one on entering a class-room; every other child seems to have a cold in the head. I said to the headmaster: "Where are the colds?" He said: "We don't have them here; the only complaint I have had about the school is that some of the parents say their children eat too much now." The success of this school was remarkable, and local Educational Authorities heard of it; in the neighbour-

ing county of Derby Mr. Widdows learned of it, and they were not long in developing it rapidly. It was only really a short time in which the old central-hall plan became almost obsolete, and all the schools took the form of these single-storeyed spread-out buildings.

Mr. Widdows, in the three points he drew attention to, put ventilation first; and in that I am sure he was right. Ventilation is an absolutely fundamental point on a plan. If you decide to make your school a cross-ventilation school, a class-room with windows on each side, you must have a certain sort of plan, and you must have definitely settled what system you will have before you can even start planning. I would like to say a word upon that matter of ventilation, because Mr. Widdows necessarily had to deal with it somewhat shortly in his Paper, and there may be some here who have not fully read Dr. Leonard Hill's investigations, and so may not feel altogether satisfied about the statement that efficient ventilation consists simply in the quality of the air.

Dr. Leonard Hill started out to investigate what has been called "crowd poison"—that is to say, the extremely unpleasant effects produced by sitting for some time in a very crowded room. He took samples of air from such a room and carefully analysed it. He found that there was rather more oxygen in that air than even on the top of a moderately high mountain. He said, therefore, it is clear that the trouble is not due to lack of oxygen; moreover, any lack of oxygen is compensated for by a slightly, almost imperceptibly, increased rate of breathing. Then he measured the quantity of carbon dioxide in this air, which is usually considered to be an index of the impurity. He found that in this unpleasant room there were 10 to 12 parts of CO_2 per 10,000, which is high. Then he went into a factory where they make aerated waters, and there he found 30 to 40 parts per 10,000, yet the workers felt no inconvenience. So it seemed that at any rate chemically produced carbon dioxide was harmless, and therefore the trouble was not due to the CO_2 . He then came to the conclusion that the real cause was stagnation of the air, which prevented evaporation going on from the skin and carrying off certain poisons from the blood. In order to prove this, he devised and carried out two experiments. He had a small glass-covered experimental chamber made, and he got three or four devoted students to sit in this; he shut them up in it. In the top of the chamber he had had installed an electric fan, without allowing any inlet of air. When he saw that these students were on the point of collapse, the electric fan was started, and they revived at once. They seemed to have very little ill-effects. Therefore it was seen that the mere movement of the air had a great effect.

The second experiment was unpleasant—for him. He again put three or four devoted men into the chamber and shut them up; he then attached an india-rubber tube into the chamber and put on a face-mask and sat

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outside and breathed the air from the chamber. He left the men in there such a time that they again became bad and were on the point of collapse, but he felt no inconvenience, though he was breathing the same air as they were, because he was outside, in the midst of fresh moving air. These experiments are fully recorded in a Blue Book. It shows that the chemical composition of the air has nothing to do with the ill-effects accompanying sitting in a crowded room. And it is very interesting to us, because it gave us a scientific explanation of what we had found so successful in practice, plenty of fresh air coming in at the windows, as the most effective ventilation which could be provided. The experiments show why the schools in which the air is kept in motion are so successful.

The open-air school, again, has had great influence on the planning of the ordinary elementary school, because these schools, which proved so good for very delicate children, those with a tendency to become consumptive, were argued to be good, for the same reason, for other children too, many of whom are none too strong. So that we have now come to the conclusion, more or less, that the best form of ventilation is the old-fashioned window. The ventilating engineer, I know, will produce a wonderful result by various forms of ventilation—the Plenum system, for example; he will wash and dry and heat and manage to keep at an equable temperature the class-room, and yet the results are appalling to those who have to work in the room. We have Plenum heated rooms, and I have found teachers in them almost in revolt; yet, on paper, almost everything is perfect. The engineer, in fact, has produced the very conditions we want to avoid; what is wanted is a definite movement of air. The net result is that the whole emphasis in school design has shifted. Instead of the old compact three-storeyed central-hall building, we have a bewildering variety of plans; plans which come to us show all sorts of shapes, from cart-wheels to hospital-shaped buildings and L-shaped buildings, but all arranged so as to secure the maximum amount of sun and to get air into the class-rooms from both sides. And the result in the schools is so satisfactory that I doubt whether we shall ever get back to the other type of buildings. We have been very fortunate in having Mr. Widdows here to-night, whose great variety of work you can see from his drawings which are round these walls, as well as by the photographs he has shown on the screen; I have very great pleasure in seconding the vote of thanks to Mr. Widdows for his Paper.

Mr. H. W. WILLS: I feel I have some reason to speak on this matter, because I had the pleasure, six or seven years ago, of undergoing some of the hardest work I have ever undergone in my life. I met Mr. Widdows and went over with him fifteen of his schools, most of the schools you have seen depicted on the screen to-

night. And, interesting and satisfactory though I thought them before I saw them in actual being, I was very much surprised and pleased to find how perfectly they were suited to their purpose on closer examination. I went into the schools at the close of the official day, and I should not have discovered, from any smell, that anyone had been occupying them. The variety of the planning struck me at once, after I had grown accustomed to the ordinary type of central-hall school, as a very great improvement, both as regards a better appearance and in the way of convenience. We have sometimes in these rooms discussed the question of official architecture; we have thought that the official architect took the work of the ordinary practitioner away from him; but after I had been round these schools designed by Mr. Widdows I came to the conclusion that there was very little in it, because in my progress through Derbyshire I did not see a school that might not have been the result of an extremely successfully conducted competition. And I concluded that the only thing the Derbyshire County Council had done was to shorten the process of selection. I therefore have very great pleasure in supporting this vote of thanks.

Mr. A. E. MUNBY: I have been exceedingly interested in Mr. Widdows' Paper. I have in my office plans of various buildings of his which I studied some years ago, and I would like to question him on one point in reference to heating. I had a school which it was proposed to go on with before the war, but it has, like so many others, since died. At that time I got a firm of heating engineers to try to work out a plan whereby the heating could be conducted on a system adopted by the Romans in years gone by—namely, by passing hot air through the floor. Mr. Widdows' method of heating his schools prompts me to ask the question—whether he has considered that method. He has some objections to the use of steam, and now uses hot water in these hollow floors. Would it not be possible to take hot air through the floors, perhaps in concrete channels, or through a hollow terra-cotta floor? I take it that with a long range of class-rooms there would have to be an upcast shaft, which would involve long chimneys, and that might not be desirable. But electricity is so general in these days that it would be a small matter to provide fans at the end of the building, which would actuate the draught sufficiently to draw the hot air through the floors (not through the room) as a continuous stream. I think the type of schools to which we are coming—the long range of class-rooms, one after the other—lends itself very much to that form of heating, and it would be interesting if Mr. Widdows, and perhaps Mr. Clay, would express opinions on that point.

Another matter is the use of tables and chairs by the children in place of the desks. Are we to consider that the old school desk is to become a thing of the past? Must a boy write at an angle of 15°, or not? And I

should like to hear about the right-hand and the left-hand light, which is considered to be of great importance. It would be very helpful if we could have some information upon that, more particularly as the design of school desks has been worked out with very great care.

Mr. W. J. H. LEVERTON: I ask, in regard to the school heated from the floor, whether dust is disturbed by it and rises in the air, and therefore whether special care has to be taken to keep the floors exceptionally clean. In certain railway carriages there are hot pipes, and in some the air is quite pestilential.

Mr. J. OSBORNE SMITH: I think all who have had much to do with schools must feel they are very much in Mr. Widdows' debt for having driven forward in a most vigorous way matters which some of us have seen only through a mist. He has been acting as a prophet, for he has been looking ahead, and I am sure that this, and the thought he has given to the subject, will redound in the future in a very great blessing, not only to the children, but also to the teachers. I have been into schools from which children have had to be taken away because they were ill. I have heard this remark: "I dare not put a child more than a quarter of an hour against that grating." I hope that school no longer exists: I do not think it does.

With regard to this perflation of air—air blowing from one side of a room to the other—it was my privilege to emphasise that point at the last Congress in London, and I am very pleased to find the same theme taken up in a vigorous way to-night.

I have thought for many years that it was wrong to continue with heavy desks; they spoil the floors and cramp the children, and we were always trying to make them fit the shoulders and back, but without success; the boys grew, but the desks refused to grow. Tables of a removable type and ordinary chairs ensure that the child shall not be kept too long cramped up.

It struck me that the top light Mr. Widdows showed was rather large for the purpose; I get sufficient light without making them so deep. I think we have been honoured by hearing this Paper, and I join in supporting the vote of thanks.

Mr. G. GILBERT SCOTT: When speaking of heating, Mr. Widdows mentioned Liverpool Cathedral, and a subsequent speaker suggested that floor heating might be adopted by circulating hot air. At Liverpool I am adopting that system of heating the floor by channels through which the hot air circulates. It has the great advantage of enabling us to use marble or stone flooring, without, I hope, causing people to complain of a feeling of coldness to their feet. It is a reversion to the old Roman idea of heating.

Mr. W. A. PITE: Mr. Widdows has given us all a great deal to think about, and if he had been talking to us about the architectural treatment of hospitals he

would, I think, have been able to speak of the same problems. I have always heard that the rules applicable to hospitals should govern schools too, and what we have heard to-night could also be most usefully applied to all buildings designed for the treatment of the sick.

The PRESIDENT: Before putting the vote of thanks, I ask to be allowed a few words.

I feel, like Mr. Pite, that we have one grievance against the lecturer, in that he described his discourse as one upon school architecture, whereas he has said so many things which are applicable not only to hospital and school work, but also to many branches of architecture. The great ventilation problem is one which has puzzled us all our lives in regard to buildings of large size; and had his title been different, Mr. Widdows' audience might have been drawn from other ranks of architects than those who have to-night been specially attracted. But his lecture was admirable, and afforded us ample food for thought, and added much to the information we all long for on such subjects.

I suspect that, among other things, Mr. Widdows is an expert in acoustics; he said a few words on that subject, which led me to think he was holding back a real reservoir of knowledge. Acting on that, I intend to go for him in privacy. I once erected a building in London which contained a committee room, and I intended it should be the best thing of its kind on the inhabited globe. I read all the available encyclopedias and the best books on acoustics, and into that building, intended to hold 50 or 60 persons, I crowded every known device to ensure success. The room was a desperate failure. It was cured, after trying three different remedies, by purchasing an £80 carpet.

There are very few questions I want to ask Mr. Widdows to reply to; indeed, there is only one, which may seem foolish to you. When we build windows with hoppers and windows on centres, we devise them so that they should facilitate the inlet of air, and I want to know from Mr. Widdows whether he tries any dodges to facilitate the exit of air on the leeward side of the room. Probably the answer to that is that so long as you have a push on one side, the pull on the other will take care of itself. Does he suggest that we should do anything in manœuvring the sashes to assist the direction of the outgoing air?

I cannot put this vote of thanks without also alluding to the mover and seconder of the vote of thanks, Sir Edmund Phipps and Mr. Clay. Mr. Felix Clay is a very well-known expert in these matters. I listened with thrills of horror to the story of the gentlemen who were put inside the glass case and demonstrated with the help of their outside companion that it was not the exhausted air alone which caused their collapse. It is news to me that the turning on of electric fans which churn the air without extracting it, really does good and not only seems to do so.

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Sir Edmund Phipps gave us a charming insight into the possibilities and the actualities of the relations between the Civil Services and the professions. I know he is one of those who wish us to live in that mutual helpfulness to one another which leads to progress; and what he said to-night in such kindly terms opens to us who are engaged from time to time with Departments of the Government the happy prospect of a smooth course in the future. I have much pleasure in putting the vote of thanks, which I am sure you will accord with acclamation.

Carried by acclamation.

Mr. WIDDOWS (in reply): Mr. President, Sir Edmund Phipps, Mr. Felix Clay, ladies and gentlemen, I thank you very much indeed, especially you, Mr. President, for your very kind words, and for the way in which these thanks have been accorded to me. It is a real pleasure to we poor people who are stuck in the provinces, and who read the names of you distinguished people in London in the JOURNAL and in the professional papers, to come and to find that you are really flesh and blood, like the rest of us in the provinces.

You have seen, in the persons of Sir Edmund and of Mr. Clay, the kind of persons there are at the Board of Education. Take my advice, and never write letters to them, but go to see them; you can write your letters after you get back, to supplement what has been said. And I thank Mr. Clay for having supplemented the brief idea I gave you of Professor Leonard Hill's work. There is plenty of food for thought in his report.

With regard to Mr. Munby's question about the use of hot air, I hoped someone would speak about it, but I did not think it would be an eminent man like Mr. Gilbert Scott. I have often admired his Cathedral at Liverpool, and I am most interested to know he is having hot air installed there. I should esteem highly the privilege if he will allow me to go to see the work there, because floor ventilation has come to stay.

With regard to having tables and chairs, instead of desks, everything is in their favour. It is all very well to put children to do their work at an angle of 15° at school, but under what conditions do they do their work at home? Also, tables are infinitely better for woodwork, cooking, needlework, and so on. There is everything to be said in favour of tables and chairs, and I think we can now turn our attention to providing better store-rooms in schools. There is no real difficulty about dust rising with the warm air from the floor; the floors are swept every day, and even if there is a little dust, it is only between 9 and 4 o'clock.

I admit the skylight is large, but the amount of light is not too great, and light from the north is stable and of soft quality.

With regard to the President's remark about my being an expert in acoustics, I beg to say I am not. And with regard to the "push and pull" in ventila-

tion, there is nothing of the kind. If the hoppers are open on both sides and the wind is blowing on one, the only thing which can happen is for the air to go out on the other; there is no need for any device for "pulling" the air out. You may ask what happens when the wind is "end on." Smoke rockets have shown that a vacuum, or something approaching it, is caused, and then the air is sucked out. I do not think heating may be essential in all places; in the institution at Ventnor of which I spoke there is none. The building is placed on the side of a cliff, and, being for consumptive children, they give the children plenty of exercise.

While we are "strung up" with regard to new buildings, there is no reason why we should not turn our attention to the old ones. I saw a voluntary school the other day which had a room that was most depressing, and something was wanted to make it better; they only put in one door, glazed to the bottom, and that made it much more cheerful. At small cost I am sure we can much improve many old buildings. We now always use the overhead system of pipes for heating, and have the radiators near the floor. The water is carried at once from the boiler to the highest point, and then gravity will be bound to carry it back to the boiler; there is a good circulation, and you get value for your money.

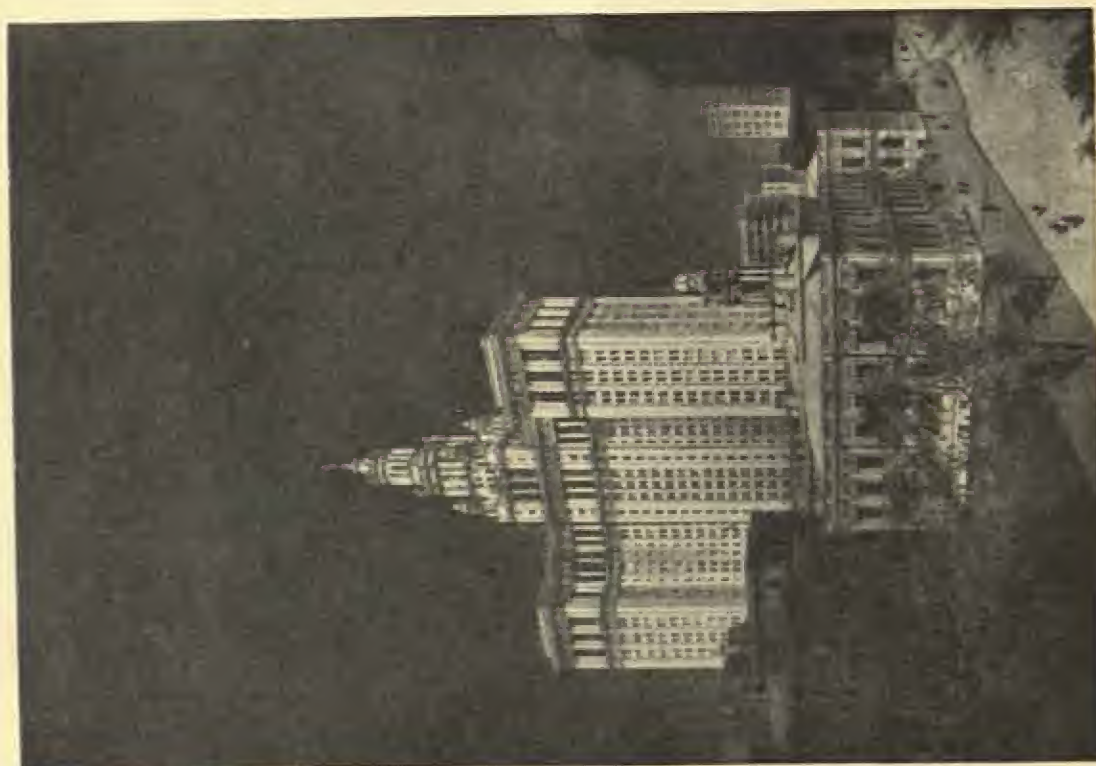
With regard to the semi-permanent building I showed you on the screen, I said a wooden building worked out at about 11d. to 1s. a foot. A concrete building works out at the same price, and one has more happiness in putting up a concrete building than a timber one.



No. 282. LORD AND TAYLOR STORE, 5TH AVENUE, N.Y.
Starrett and Van Vleck, New York.



SCOTTISH RITE TEMPLE, WASHINGTON, D.C.
John Russell Pope, New York.



MUNICIPAL OFFICE BUILDING, N.Y. Old City Hall in Foreground.
McKim, Mead and White, New York City.



NO. 156.—GENERAL VIEW, PANAMA-CALIFORNIA EXPOSITION, SAN DIEGO, CALIFORNIA.
Bertram Grosvenor Goodhue. New York.

Exhibition of American Architecture

By H. AUSTEN HALL [F.].

IF Paris gives the finest architectural training in the world, it is America that provides the opportunities for practice, without which we should never know the value of that training. For architecture as learned in Paris and practised in the United States is a very wonderful thing. It is the most alive of all the arts, and considerably the most important, for there is no expression of American life so complete as its architecture. For these reasons the exhibition of American architectural work now open at the galleries of the Institute is of the greatest importance. The selection is confined to buildings erected within the last twenty years by the leading architects of our time. The subjects are illustrated mainly by photographs of superb quality, and a few remarkable coloured drawings and lithographs. The hanging committee are to be congratulated upon the skill and taste they have shown in the arrangement of the pictures.

The present phase of architectural expression owes its beginnings to the firm of McKim, Mead and White, who commenced practice in 1879. For more than forty years this firm has produced designs for every class of building, in which great fertility of invention has gone hand in hand with profound knowledge of Italian work, until their ideals have been adopted by the great ma-

jority of American architects. The effect of this solidarity of thought is seen in the extraordinary high quality of the work being done at the present time. The whole country is steeped in the tradition of McKim, with the happy result that distinction in design is sought along the traditional lines rather than by traversing them.

A notable exception is in the work of Louis H. Sullivan (No. 10), which is so remarkable in its cleverness as to divert a few from the straight path. But the great majority work along the national lines, which are providing America with the finest modern buildings in the world.

It is well for us to recognise at once that American architects are more successful in the handling of the larger problems of design than we in England. This statement requires no qualification. The frank acceptance of the fact can be only beneficial, for it will lead us to a very careful examination of the work shown in this exhibition, and a reasoned consideration of the qualities by which it is distinguished. The time is opportune for such consideration, for London is being rebuilt, and there is a sense of uneasiness abroad as to the form that our new streets are taking—a misgiving that all is not well. It is good, therefore, that we should turn

our minds to the great achievements of America in architecture, so well represented here, and make a few blunt comparisons with conditions in England.

The New York Municipal Building (No. 43), by McKim, Mead and White, is frankly a "skyscraper," planned upon a site of extraordinary difficulty, but nevertheless a building of great beauty, and probably the most successful of the tall buildings in America. Seen from the Woolworth Tower opposite, with the charming old City Hall in the foreground, its graceful outline against the blue of the sky forms a picture not easily forgotten. Notice the expanse of the plain wall surfaces relieved with a diaper of window openings and crowned with a splendid tower between the twin roofs of the pavilions.

A striking contrast in height is the Morgan Library (No. 40), by the same architects. Here we have the proportions associated more closely with English practice, but no loss of dignity is involved. This little gem is one of those perfect works of art which must always be rare in any country. The combination of great delicacy in the detail with the most lavish decoration internally is to be noticed.

The Gorham Building (No. 33), by the same architects, is remarkable for its simplicity and admirable proportions. It is a modern shop building, on Fifth Avenue, that has had many imitators in the States; and of its type it is as near perfection as has yet been reached.

But there is another reason for selecting it for special notice. It is 130 feet high to the top of the cornice, facing on a street 100 feet wide and a side street 60 feet wide. Such a building is impossible in London with the existing restrictions upon the height of buildings, and it is important that all who are interested in this subject should see this example of the proper use of freedom. Consider the eminently satisfactory shape it gives us—neither a "skyscraper" nor too low for good proportion. Is not the time ripe for some alteration in our own Building Acts whereby architects may arrive at the right height both for architectural treatment and for meeting the growing requirements of healthy commercial activity? There is a staleness creeping into our new streets. We see the endless repetition of ground storey, column, and attic, with two rows of dull dormers in the roof. There is a fixity about these compositions for which architects are unfairly blamed. How can the public know that the design they are criticising so freely is really a rectangular shape, defined by the building laws, which the architect has to fill in as best he can? This imposition of a height limit unrelated to architectural design or the width of the street is the greatest obstacle to fine street architecture. Alter the height limit but 20 feet, and a sense of freedom is gained, with astonishing results in freshness of design, as this exhibition proves. Until this is done we must be content to

see other countries surpassing us, because they are unhampered by restrictions which strike at the very springs of thought, and put ideas at a discount from their source.

On the wall opposite is the great Temple of the Scottish Rite at Washington (No. 51), by that remarkable architect John Russell Pope. The finest Masonic Temple in the world, designed by a man who is not a Mason, it strikes a dramatic note that could scarcely be achieved in buildings for commonplace purposes. The artist has seized a unique opportunity to employ archaic forms in which to shroud the mystery without losing the element of surprise which underlies all great design. Look carefully at the interiors, and you will find this element is not lost, for every step of the way to the great chamber on the upper floor suggests architectural power and imagination of a high order. The wonderful colour drawing is worthy of the subject it illustrates.

To avoid the charge of praise without discrimination, we must look at the great New York Post Office (No. 37), which is rather a disappointment. The colonnade is strangely monotonous, and the flanking pavilions are quite unworthy of the building. The inscription, 300 feet long, over the principal front is something of a curiosity. It reads: "Neither snow nor rain nor heat nor gloom of night stays these couriers from the swift completion of their appointed rounds."

As E. V. Lucas has wittily remarked, Americans are remorseless when they are making themselves clear.

It is remarkable that a commercial country like America should have grasped the significance of the railway station as the gateway of the city. The Pennsylvania Railway Station (No. 28) is to New York what the great gateways were to Rome—they are related to the splendour of the city to which they give entrance. Nothing is permitted that would destroy the dignity of the first impression. Advertisements are rigidly banned, and even smoking is not permitted in some stations. A smaller example is the Richmond Station (No. 52), which has the same qualities of dignity with which the larger stations are marked; and all over the States will be found the same desire to give the entrance to the city an importance that is proper to its function.

It is perhaps in office buildings that Americans differ most of all from the rest of the world. The conditions obtaining in some of the largest cities have forced them to adopt great heights, with a correspondingly difficult problem for the architects to solve. This problem has been completely mastered, as in the Municipal Building previously mentioned.

The latest of the high buildings is the Cunard Building (No. 116), which is interesting as an example of the application of the new zoning laws, which impose offsets at a certain height according to the district in which



No. 188.—CENTRAL PUBLIC LIBRARY, INDIANAPOLIS, IND.
Paul P. Cret and Zantzinger,
Borie and Medary, Philadelphia, Pa.



No. 163.—REREDOS, ST. THOMAS'S CHURCH, N.Y.
Bertram Grosvenor Goodhue, New York.



MURRY GUGGENHEIM RESIDENCE, ELMERON, N.J.
Carrere and Hastings, New York.



No. 28.—PENNSYLVANIA RAILROAD STATION, N.Y., MAIN WAITING ROOM.
McKim, Mead and White, New York City.



No. 33.—GORHAM COMPANY'S BUILDING, N.Y.
McKim, Mead and White, New York City.



No. 39.—THE UNIVERSITY CLUB, EXTERIOR VIEW.
McKim, Mead and White, New York City.



No. 53.—PAN-AMERICAN UNION, WASHINGTON, D.C.
Kelsey, Albert and Paul P. Cret, Philadelphia, Pa.

the building is situated. These offsets are cleverly handled, and rather add to the interest of the design than otherwise.

The exhibition contains examples of some of the finest banks in the States. No one should miss seeing the Guaranty Trust Building (Nos. 237 and 238), by York and Sawyer.

After looking at the banks, take a walk round London to see what we are doing, and it will be impossible to close our eyes to the fact that we are trifling away our opportunities for fine architecture. We have nothing to show which will compare with the great financial headquarters of New York and other American cities. We are deliberately creating banality on every hand by which future generations will remember us, and the only chance of escape is by realising it in time.

A matter of great interest to architects at the present moment is the design of store buildings, with which the West End of London is being liberally provided. The Gorham Building has already been mentioned. It has a near relation in the Lord and Taylor Store (No. 282) (see p. 45), the latest of the large buildings of this kind in New York. Notice the satisfactory solution of the shop-front problem, and the noble archway for entrance—the great plain mass of the upper storeys, in which the windows make a pattern and give the scale—the crowning cornice of excellent design. The interior shown is full of interest. The theatre, restaurant and roof garden indicate the resources of which such a building is capable, a complete community within the walls of a single store. The dignity of commerce is well expressed in these stores, many of which display no name of the firm. They are satisfied with a civic importance not less than the public buildings around them.

It will be noticed that the detail of the Lord and Taylor Store is small and delicate, in spite of the great size of the building. That very large buildings do not require coarse detail needs emphasis on this side of the Atlantic. Look at the fine Apartment House (No. 179) by Charles Platt, a building of very great size, with the utmost delicacy in the architectural features, and observe how the sense of scale is enhanced by great refinement.

It is fortunate that the exhibition includes the altogether delightful Pan-American Building at Washington (No. 53), now the headquarters of the International Conference on Disarmament. The architects, Messrs. Cret and Kelsey, may well feel proud of the importance that must henceforward attach to their fine work, the beauty of which cannot be without its effect upon the many assembled nationalities within its walls. It is a French building enclosing an open cortile of Spanish-American design, in which tropical plants and rare birds supply the colour and life, and suggest the range of climates embraced by the great North American Republic.

Of Gothic work it is difficult to speak with the same enthusiasm and assurance. The application of Gothic details divorced from Gothic construction in the tall buildings creates a sense of sham difficult to escape. With the single exception of the Woolworth Building, the Gothic "skyscrapers" are not a success. To see the flower of Gothic architecture in America we must turn to Mr. Goodhue's work in the three great churches he exhibits (Nos. 154, 155, 164). It was a remarkable experience to leave the noise of Fifth Avenue for the gracious interior of St. Thomas's Church, where behind a screen the great reredos (No. 163) was being built (1919), the sound of traffic subsiding into the faint tapping of the carvers' chisels as they fashioned mediæval saints in their high niches.

The same architect contributes a general view of the Panama-California Exhibition (No. 156) in a wonderful drawing by Burdette Long. This is the most remarkable picture in the collection. It is a conception of fairyland produced in modern America, and it is only by the aid of photographs below that you can realise it is really built. One would not be surprised to see Don Quixote riding over that bridge to some amazing adventure in the city of dreams on the hill beyond. The most improbable things in Hans Andersen could happen anywhere in such surroundings. The Panama Canal itself is hardly more wonderful. American architects have a habit that is almost uncanny of rising to an occasion.

The domestic work shown should be of special interest to English architects, for in this branch of architecture England has long been supreme. Nothing in the exhibition will alter that position. The reproductions of typical English work in the States do not look right divorced from the surroundings natural to the style of our buildings; for it is our peculiarly English atmosphere and setting that have given us our domestic architecture.

There is another tendency in American design which should meet with greater success. It is the development of the old Colonial style, which owes much to the Brothers Adam on this side. In this manner some of the exhibits are admirable examples.

But perhaps the best of all the houses are those severe plastered fronts, with no expression of a period other than their own. Here is no echo of dead forms, however gracious, but a straightforward sense of comfort and spaciousness. The absence of mouldings will be noticed, the simple tiled roofs with great eaves. There are too many of these for special mention, but Nos. 139, 144 and 160 are typical. It is refreshing to feel that books have been put aside, and copies of English villages no longer persisted in; but a real American expression given to American homes. It is along these lines alone that they can attain to the excellence which marks their great achievements in the larger problems of design.



No. 55. PAN-AMERICAN UNION, WASHINGTON, D.C.
Kelsey, Albert and Paul P. Cret, Philadelphia, Pa.



No. 113. LANGDELL HALL, HARVARD LAW
SCHOOL, CAMBRIDGE, MASS.
Shepley, Rutan and Coolidge, Boston, Mass.



No. 154. EXTERIOR, CHAPEL OF THE INTERCESSION,
BROADWAY AND 155TH STREET, N.Y.
Bertram Grosvenor Goodhue, New York.



No. 129. FIRST CONGREGATIONAL CHURCH,
RIVERSIDE, CALIFORNIA.
Myron Hunt, Los Angeles, Cal.

American Exhibition

OPENING CEREMONY.

SPEECH BY LADY ASTOR, M.P.

On Wednesday afternoon, 23rd November, the Hon. Lady Astor attended to perform the opening ceremony, in the presence of a large and distinguished company.

Lady Astor was received by the President, Mr. Paul Waterhouse, and members of the Council, and, after a brief introduction by the President, said :—

Sir, ladies and gentlemen,—I have great hesitancy in coming to open so wonderful an exhibition, especially after reading what Mr. George Moore says about politicians and aristocratic patter. I did not feel very happy then, and I feel less happy to-day after receiving a letter from a great friend, in which he wrote : " Kind regards, and apologising for suggesting speeches to such a nimble wit as yours, but I did not feel you were quite on your own ground the last time I heard you talking about arts and crafts." That, I say, did not help me. Then he says : " As it is about as difficult to get honest architecture as honest anything else to-day, can we suggest that you propose to them that there should be a ten years' style holiday, like the ten years' Naval holiday, and that architects give up plastering classical mouldings over buildings during that period, and really try and consider modern materials and modern ways of building ? " That is for the architects. And here is another thing, which I am afraid will discourage the young men : " Another thing you might say to them is that no architect should ever be allowed to build a family house until he is married and has had three children, and then he must submit the plans to his wife first. I speak feelingly." So you will understand it is with a feeling of great hesitancy I am here before you ; but I am delighted to be connected with anything of this kind, and though, as my friend says, I do not feel very much at home when talking of arts and crafts, yet I do feel very much at home with you in this exhibition of the work of American architects, because I knew Hastings, and McKim, and Stanford White well ; they were—some are still—geniuses. And I think we have much to learn, in the way of public buildings, from them. I was never more amazed when I returned to America than to see the beauty of the stations. That is modern architecture. But there is one thing I do not think they have in America so good as we have in England. The outsides of their houses may be more beautiful, but I defy anyone to make the insides of their houses as comfortable as the British.

I will say nothing more, except this : that women do feel very strongly about architecture, because they have got to build up the characters inside the home, as the architect has to build up the characters of the people who pass by and look. They both go together. I hope

to-day that this will help us here in England to see what can be done in the way of public buildings. We have got wonderful monuments of the past, but I am afraid some of our modern buildings are not quite up to the mark in comparison with some American. But we may take comfort from the fact that what really matters is inside, and no one can beat the British in that.

Now I have pleasure in declaring this Exhibition open.

THE PRESIDENT : I am sure you will allow me, ladies and gentlemen, in a few words to express first our thanks to Lady Astor for all that she has so graciously done. I am sure that by this time Lady Astor is tired of being reminded that she is the first lady M.P. : she will prefer to be regarded as an ordinary legislator with an extraordinary power. It is a delight to me to realise at this exhibition—as I always have realised, but now more fully than ever—that architecture in America is more European than Europe ; it symbolises the great brotherhood between us and the American past.

I will ask General Seely to be good enough to second the vote of thanks.

GENERAL SEELY, M.P. : I think it is a fortunate thing that we have got this exhibition of American architecture here, and that Lady Astor has been asked to open it, because as a student of architectural affairs, and as a father of a family of more than three, one of whom has considerable architectural genius, I think we have much to learn from America, and, as you have been good enough to indicate, Lady Astor, America has a good deal to learn from us. And the more we see of them, in architecture and in everything else, the better it will be for the world. But it is especially in architecture, where our paths have been so divergent, producing such extraordinary varieties of style and thought in this the greatest of the Arts, that it is high time we came together and made common cause in this, as, I suppose, in other things. I beg, with all respect, in the midst of this distinguished company, to second the vote of thanks to Lady Astor for having declared this Exhibition open, and I will ask the President to put it to the meeting.

LADY ASTOR, M.P. (in reply) : People talk about uniting the countries ; I think America and England should remember that it is taste that unites countries, not treaties. The Americans and the English have the same ideas about home, and I think that is what is uniting races more than anything else. It is uniting our two races and making us as a beacon light to all other races ; and so architects coming together is just American and English thoughts coming together to construct everything which will be permanent and beautiful, I hope.

THE PRESIDENT : There is a most interesting public meeting to be held here at 5 o'clock on Friday



THE CENTURY CLUB, N.Y., 1891.
McKim, Mead and White, New York City.

next, when the great American architects Mr. Goodhue and Mr. Barber, will address the meeting; and I hope all who are here will take the opportunity of coming, and inviting their friends to do so, the notice being so short.

STUDENTS' EVENING AT THE AMERICAN EXHIBITION.

Arrangements have been made by the Board of Architectural Education for holding a Special Students' Evening in connection with the Exhibition of American Architecture on Friday, 2 December, at 8 p.m. Several prominent architects, familiar with recent

American work, will be present and give students information on points of interest. An opportunity will be afforded students of gaining an insight into the trend of thought and methods of American architects. Students from the Architectural Schools and others are invited to be present. No cards of admission are required.

MR. WALCOT'S ETCHINGS.

At Monday's meeting, on the motion of the President, a vote of thanks was passed to Mr. William Walcot and his publishers for the presentation of a complete set of framed etchings of his classical compositions. In moving the vote, the President said: "Nearly all of you know something of Mr. Walcot's work as an architectural artist; he stands alone in this respect; the presentation comprises some of his reconstructed representations of the citizen life of Rome, Athens and Egypt."

FEES FOR HOUSING WORK.

On the recommendation of a Joint Meeting of the Practice Standing Committee and the Committee of Housing Architects, it was decided to summon a Special General Meeting to consider the proposals of the Joint Meeting for resuming negotiations with the Ministry of Health.

THE SOUTH WALES INSTITUTE OF ARCHITECTS.

The new rules of the South Wales Institute of Architects have been approved by the Council of the Institute.

NEW ALLIED SOCIETY.

The Norfolk and Norwich Association of Architects have been admitted as an Allied Society of the R.I.B.A. under the provisions of By-Law 78.

RESIGNATION OF MEMBER.

Mr. John Pain Clark has resigned his membership as an Associate.

BUILDING RESEARCH BOARD.

The Science Standing Committee of the Royal Institute of British Architects, having received an invitation from the Director of Building Research to pay a visit of inspection to the Experimental Station of the Board at Acton, accepted the invitation, and arranged a special meeting of the Committee for Thursday, 24 November, at the Experimental Station.

Reviews

ÉCOLE NATIONALE DES BEAUX ARTS. *Concours pour le Grand Prix de Rome d'Architecture*. 9 plates, folio, Paris, 1914; 15 plates, folio, Paris, 1919; 4 plates, folio, Paris, 1920. [Armand Guérinet, 140 Faubourg St.-Martin, Paris.]

These designs are the fine flower of the Beaux Arts teaching and the outcome of the tradition of at least a century.

The number of subjects suitable for the different competitions is, of course, limited, and they recur at more or less regular intervals; thus a student before going into "loge" to make his preliminary sketch can often give a shrewd guess at what subject will be set, and will look up in the books what has been done in former years and base his design thereon. A *lycée*, for instance, can be traced back probably to the time of Napoleon I., and a comparison of its reincarnations during the century would be most instructive; indeed, it is unfortunate that we have not in the Library some illustrations of the Prix de Rome designs of 100 years ago to put beside the present series—the contrast would be striking! As the years pass these designs seem to have less and less relation to reality, and one wonders when the constant crescendo of extravagance, lavish accessories and gorgeous *mise en scène* will stop—surely the 1920 monument to Victory, with its crowning figure which, in the absence of a scale, looks about the height of the Eiffel Tower, is the crest of the wave!

It takes eight or ten years' hard work to make a Prix de Rome man, and when he is made his executed work bears very little resemblance to anything he did at the school—you have to go to America to see a Beaux Arts "projet" materialised. The writer owes too much to the French School to attempt to belittle its fine traditional teaching, but this seems to him to be in danger of being stifled by sheer dexterity of presentation; the Frenchman appears able to assimilate the kernel and reject the husk, but the foreign student too often emerges from the course exceedingly "husky."

If it be well that our young men should see visions, may not an old man dream dreams of a return to sobriety and common sense?

CHARLES E. SAYER [A.].

THE SITE OF THE GLOBE PLAYHOUSE, SOUTHWARK. *With an Appendix by the Architect to the London County Council*. [Published by the London County Council.]

The whole point of the recently published L.C.C. report turns on the question as to whether the Globe was on the north or south side of a lane then known as Maiden Lane, and now known as Park Street, Southwark. The point is not a very vital one; but as the

L.C.C. have come to the conclusion that the theatre was on the south side, I do wish to enter my protest, as the contemporary evidence clearly shows that it was on the north.

I am anxious to indicate one or two particulars showing the error in the judgment and decision of the L.C.C.

It will be generally agreed that the contemporary evidence is the best evidence. Those who actually saw the theatre and wrote about it, and even went so far as to define its boundaries in a legal document, and also those who saw the theatre and drew it amidst its surroundings in the map-views of the period, are more likely to be right in matters of fact than a committee of the L.C.C. sitting some three hundred years after the theatre was pulled down.

Now the chief amongst the contemporary documents is one which may be called "the lease transcript dated 1616."

This document was drawn up in consequence of a family dispute amongst those who had an interest in the profits of the theatre. It became necessary for the attorney to recite the boundaries of the land leased by Nicholas Brend to Cuthbert and Richard Burbage, William Shakespeare, Augustine Phillips, Thomas Pope, John Hemynge and William Kemp.

Within boundaries of the land so leased the Globe Playhouse was built. The land is described as abutting "upon Maiden Lane towards the South." The theatre must have been on the north side of the road, as otherwise it could not have abutted upon Maiden Lane towards the south. This portion of the document, if taken by itself, would unquestionably settle the question; but the L.C.C. find in it a "serious difficulty." The document also says that the land abutted upon a piece of land called the "Park" on the north. Now the only piece of land the L.C.C. know of as the "Park" is the Lord Bishop of Winchester's Park, which is to the south of Maiden Lane. Hence, if you please, the L.C.C. jump to the conclusion that the attorney, in drawing up the lease transcript of 1616, mistook north for south and east for west, and the document should in consequence read as though the land abutted upon Maiden Lane towards the north and the Park towards the south. By this topsy-turvy line of argument the whole site is transferred from the north of Maiden Lane to the south.

But the argument is not sound.

(a) If the Bishop's Park had been intended, it would be described as "the Bishop's Park" in this legal document as in others of the period.

(b) Is it in the least likely that neither Nicholas Brend, the lessor, nor Cuthbert and Richard Burbage, William Shakespeare, Augustine Phillips, Thomas Pope, John Hemynge and William Kemp, the lessees, should have signed the original lease and not have detected the error in the orientation? They were all

men of affairs, and it must be presumed that they understood and knew what they were signing. But the fact that there was some land lying to the north can be supported by other contemporary documents; but the evidence as shown in (a) and (b) is alone sufficient to dispose of the hypothesis advanced by the L.C.C. as to the mistake in the orientation. Now here is another point which will be more readily appreciated by architects than others, and it is conclusive as to the accuracy of the lease transcript of 1616. Maiden Lane had two ditches or sewers, one on the north side of the lane and one on the south side. The frontagers on the north had to keep their sewer clean and in order, and a like responsibility fell on the frontagers on the south side.

The Surrey and Kent Sewers Commission, on 5 December 1595, ordered one Sellers (whose name must not be forgotten, as he will again be referred to shortly) to carry out certain work in connection with the northern sewer. The order stands as follows:—

"William Sellers and all the land holders or their tenants that holde anie landes, gardeins, ground or tenements abutting upon the common sewer leadinge from Sellers gardein to the Beare Gardein to cast, cleanse," etc.

Now, the L.C.C. state that the Bear Garden was on the north side of Maiden Lane, and in this I agree. But if the Bear Garden is on the north side, then Sellers' garden must be on the north side also, for it is the sewer between his garden and the Bear Garden that required attention.

If this logical reasoning is accepted, then there is no escape for the L.C.C. Sellers in the lease transcript of 1616 is mentioned as being on the eastern boundary of the land leased by Brend to Burbage, Shakespeare and others. We have seen that Sellers was on the north side of the road, and, as he adjoined the Globe site, it follows that the Globe must have been also on the north side, unless both these documents are wrong.

If further evidence is required, another minute in the Surrey and Kent Sewers Commission may be quoted. On 14 February 1605-6 the Commission made the following order: "It is ordered that Burbage, John Hemings and others, the owners of the Playhouse called the Globe in Maiden Lane shall . . . pull up and take cleane out the sewer, the props and posts which stand under their bridge on the north side of Mayd Lane."

What could be more convincing and conclusive?

I should like also to refer to the map-views of the period, though their evidence is dismissed by the L.C.C. in a short footnote as follows:—

"In view of the unreliability, in matters of detail, of the early map-views of London, the evidence on both sides is limited to the evidence of documentary character."

Now the evidence of these views is particularly clear, unanimous and conclusive, and why Mr. Topham Forrest

should have given us this purely imaginary sketch of the surroundings, when he might have followed such a view as Agas's, dated 1616, is a little hard to understand.

These two views, side by side, should be examined for the purpose of observing the topographical differences between them. Of course, one explanation may be that Agas's view would not accord with Mr. W. W. Brain's report, and the same might be said of "Londinum Urbs precipua regni Angliæ." Merian's view of London, Vanden Heeye's view, "Profil de la ville de Londres" by Picart, F. de Wit's view of London, Hollar's view.

Seeing that all these views show the Globe and name the building by an inscription written above it, or, alternatively, they print an index number above the building, which by reference shows the Globe Playhouse is intended, their direct evidence should have been considered.

All these views were either drawn during the life of the Globe or published shortly afterwards, and, without one exception, they show the Globe to be north of Maiden Lane. It seems rather extraordinary that, because the views may be unreliable in matters of detail, their evidence, in this unprejudiced inquiry, on a matter of some importance should be discarded.

There is not a single view, so far as I know, that places the Globe on the south side of Maiden Lane, nor is there a single contemporary document which places it there.

GEORGE HUBBARD [F.].

ARCHITECTURAL RENDERING IN WASH.

By H. Van Buren Magonigle, F.A.I.A., with a preface by Thomas R. Kimball, F.A.I.A. 40, New York, 1921. £1 12s. [Charles Scribner's Sons, New York.]

This book gives better than any other the information required by the present-day architectural student. We already know Mr. Magonigle as an architect, and here he is revealed to us as both an author and a draughtsman.

Many questions of materials, properties of pigments, and methods of procedure are here discussed. The author gives his own working palette and those of artists like Jules Guérin, Paul Cret and Otto R. Eggers, and attempts to lay down rules for a clear and accurate presentation of architectural design. These rules, based in the main upon a detailed study of Beaux Arts methods, represent the manner at present established for rendering both in America and in a lesser degree here in England.

The value of such attention to fine drawing and accurate presentation towards the production of fine architecture is to be seen not only in the author's own essays in building, but in American architecture in general.

H. CHALTON BRADSHAW [A.].

The Temple Door in Vitruvius

BOOK IV, CHAPTER 6.

The passage in Vitruvius describing the method to be followed in setting out the paneled door of a temple is as follows* :—

Fores ita compingantur uti scapi cardinales sint ex latitudine luminis totius XII parte. inter duos scapos tympana ex XII partibus habeant ternas partes. in pagibus distributiones ita fient uti divisio altitudinibus in partes V, duae superiori, tres inferiori designentur. super medium medii inpages conlocentur, ex reliquis alii in summo alii in imo compingantur, altitudo inpagis fiat tympani tertia parte, cymatium sexta parte inpagis. scaporum latitudines inpagis dimidia parte, item replum de inpage dimidia et sexta parte. scapi qui sunt secundum antepagmenta, dimidium inpagis constituentur. sin autem valvatae erunt, altitudines ita manebunt, in latitudinem adiciatur amplius foris latitudo. si quadriforis futura est, altitudo adiciatur.

This passage has been variously interpreted in the notes and illustrations of different editors. But however much these interpretations differ in other details, they all agree in making the door only two panels wide ; and then with difficulty, by more or less ingenious devices, barely succeed in making it just wide enough to fill the opening. If, however, any value attaches to the obvious meaning of *antepagmenta*, the word used to indicate what we call the door case, or to the evidence of remains of ancient doorways, the door must be wider than the opening ; for it was hung (or pivoted) in the recess behind the *antepagmenta*, and overlapped them on both sides. There are also objections to the device common to all these interpretations—without which no ingenuity could make a door two panels wide fill the aperture—of taking the second sentence to mean that the breadth of the panel was to be three-twelfths of the whole width of the opening. Firstly, that is not the natural meaning of the words, especially when the *totius* of the first sentence is taken into account ; and, secondly, it makes the operation to find a unit of measurement a useless absurdity. For the width of the rail then becomes again just a twelfth of the width of the opening, the same as that of the pivot style which has already been set out, and which might just as well be used as the unit. Another common device is to give the door two styles in the middle, which can only mean folding doors, an interpretation forbidden by the penultimate sentence of the passage. Newton, it is true, tries to get over this objection by suggesting that *valvatae* may mean three-fold ; but, apart from inherent improbability, the folding, or double, door meaning is too

well established by reference to other writers to be easily questioned.

A single door, four panels wide, is not open to any of the above objections, and, curious as it may appear at first sight, when set out as specified it fits the aperture within a one hundred and forty-fourth part of the width, and allows for the overlap behind the *antepagmenta*. The dimensions work out thus : deducting two-twelfths from the total width of the aperture for the *scapi cardinales*, there remain ten-twelfths, or 120 one hundred and forty-fourths. The panels are therefore 30 one hundred and forty-fourths each, the rails 10, and the styles 5. The parts of the outer styles, or *scapi cardinales*, showing in front next the *antepagmenta* (*secundum antepagmenta*, or, as the principal MSS. have it, *ante secundum pagmenta*) are also 5. There are therefore four panels at 30 each and five styles at 5 each, making 145 one hundred and forty-fourths, and leaving 7 one hundred and forty-fourths for overlap on each side, being the width of the outer style in excess of what shows in front. This appears to be sufficiently exact : for joiners who can work to the twelfth of an inch in the foot are not often found among the unemployed. It is possible that the overlap is what Vitruvius calls *replum* (a word which my dictionary says is of doubtful meaning), although in the text it only works out at $6\frac{2}{3}$ one hundred and forty-fourths instead of 7. The word must be connected with *repleo*, to make up, or with *replico*. In the latter case it might mean what goes back (into the recess), or what overlaps.

A curious point in the setting out is the narrowness of the styles and rails, the former being but a sixth of the width of the panels, and the latter a third ; so that a twelve-inch panel would have but two inch styles and four inch rails. But if we make the reasonable assumption that the *cymatium*, mentioned in connection with the rail, is a moulding all round the panels, run on the solid of the framing, and adding to the width of its members, their breadth becomes sufficient for a hardwood door, probably rather thicker than we are now accustomed to. The extra width does not affect the setting out ; for the panel groove must be taken into account and may be assumed to be as deep as the moulding is wide : that is also a sixth of the rail.

FRANK T. BAGGALLAY [F.].

PROPOSED INSPECTION OF PUBLIC BUILDINGS.

In view of recent accidents to public buildings resulting in loss of life, a Committee of the Association of Municipal Corporations is considering the desirability of some system of periodical inspection of public buildings. At the invitation of this Committee, the Council of the Institute have appointed two representatives, Mr. H. T. Buckland, of Birmingham, and Mr. E. Stanley Hall, of London, to meet the Committee and discuss the question with them.

* Rose and Müller Stübner's text.

The Library

NOTES BY MEMBERS OF THE LITERATURE COMMITTEE ON
RECENT ACQUISITIONS.

[These Notes are published without prejudice to a further and
more detailed criticism.]

EUGENIO OLIVERO: *Le Opere di Bernardo Antonio Vittone, Architetto Piemontese del Secolo XVIII.* Turin, 1920. 3s.

An account of the life, writings, and buildings of Vittone (d. 1770), an architect with a large practice in Turin and Piedmont during the middle half of the eighteenth century. The work opens with a study of Piedmontese life in the 16th Century. Then follows a lengthy description of the two books that Vittone produced, like every other architect of his day. These four stout quarto volumes contained "elementary instructions for the young in architecture" and "the rules of architectural practice." They were prefaced by the usual fulsome dedication, contained the usual engravings, and are said by the modest biographer to include "everything that an architect and engineer need know." Vittone built many churches and palaces in Turin and its neighbourhood. They display the Rococo tendency that followed the Baroque in Italy, especially in Piedmont, but some of them have interesting detail, and the striking church plans—oval, octagonal, and so on—contain much "inspiration" for modern borrowers. M. S. B.

ITALIA ARTISTICA: Catania; Orvieto; Taormina; Napoli; Sorrento; Livorno; Bagni di Lucca, Coreglia e Barga. 7 vols. 40, Bergamo. 4s. 6d. each.

These seven volumes are not all recent, but have been added to the Library to fill blanks in a large and well-known series of monographs now including every Italian town or district of any artistic importance. All are the work of competent writers, and are splendidly illustrated. To an architectural student who can read Italian they are invaluable, for they give the art history of each town in convenient form, and illustrate every notable monument. Plans of buildings are not included, but there are reproductions of old prints, in addition to photographs of architectural detail, sculpture, paintings, and landscape. M. S. B.

ARCHITECTURAL OFFICE ADMINISTRATION. By Francis Lorne, A.R.I.B.A. 80, Lond. 1921. 5s. [Technical Journals, Ltd.]

The object of this book is to give the student a grasp of modern business methods and office administration. It contains a number of specimen time sheets, forms for registering dispatch of drawings, etc., and valuable hints on the importance of keeping written records of all interviews and instructions given and received. E. S. H.

ALT-DÄNEMARK. By Dr. Edwin Redslob. 40, München, 1921. 15s.

A book dealing with the little-known Renaissance of Denmark cannot fail to be of value as a supplement to our information of the Renaissance in Northern Europe. The illustrations are good, and many of the buildings shown will stand comparison with those of the better-known work of the Renaissance in this country and in France. S. C. R.

THE ART OF DRAWING IN LEAD PENCIL. By Jasper Salwey. 80, Lond. 1921. 10s. 6d. net. [B. T. Batsford, Ltd., 94 High Holborn, W.C.]

A charming book on a charming subject, treated withal in a thoroughly practical manner.

The numerous illustrations are well chosen and beautifully reproduced, and will be a revelation to most of us of the perfection to which the recent revival of the art of pencil drawing has attained.

It is interesting to note how well the architects show up in this collection, and not least of them the author.

C. E. S.

Prof. Groom on Dry Rot

By W. E. VERNON CROMPTON [F.].

I suggest that something more than formal notice should be taken of the Chadwick Public Lecture given in the gallery of the R.I.B.A. on 3 November last by Professor Groom on "Dry Rot of Wood and Sanitation," with Mr. John Slater, one of the Chadwick trustees, in the chair.

I do not think it would be going too far to say that this lecture marks a definite stage in the question of dry rot in its relation to architects and their work.

When the R.I.B.A. was asked in 1915 to meet the Committee of the Privy Council for Scientific and Industrial Research for the purpose of drawing its attention to matters which architects thought were of sufficient importance to form the subject for research, dry rot was the first subject to which the Committee's attention was drawn; and I well remember the look of surprise that spread over the face of the chairman, Sir William McCormick, when it was pointed out to him that Germany considered the matter of sufficient importance to warrant the expenditure of £40,000 upon an institute at Jena devoted to research into the destructive action of fungi upon timber.

Not having heard recently about this institute, I was beginning to fear that it might be a war myth akin to the passage of the 80,000 Russians through England and the Angels at Mons, but Professor Groom referred to its existence in his lecture, and confirmed the fact to me afterwards.

Further, the Germans appear to publish annually at Jena a volume called *Hausschwammforschungen* (House fungus investigation), which attained to its sixth volume in 1912.

These facts are mentioned to substantiate what has been said above, that this question of dry rot should be held to be of very considerable interest to architects and of importance to the country.

Professor Groom commenced by defining dry rot and explaining its causes, most of which are known to architects.

In speaking of the great wastage of timber, he referred to statistics kept in the U.S.A., from which it had been calculated that if wood were adequately protected against fungoid type of decay, the annual saving would be 7,000,000,000 board feet of timber.

As might be expected, there were no statistics available in this country to determine the annual waste, a wastage that was likely to increase because the timber in daily use had not the resisting qualities of timber a generation or more ago, owing to inadequate seasoning and to the depletion of the forests; smaller timber having a larger proportion of sap wood being thrown upon the market.

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By means of slides the lecturer explained the growth and described the characteristics of *Coniophora cerebella*, *Polyporus vaporarius*, and especially of *Merulius lacrymans*—or *domesticus*—the true dry rot, which is so virulent that it is able to eject some 500 million spores in ten minutes from about a square yard of fungus.

One of the most interesting points made by Professor Groom was the fact that the spores of *Merulius* will infect wood only after it has been attacked by some other species of fungus.

He himself had found it impossible to germinate spores upon clean wood, but had been able to do so upon wood that had previously been attacked by *Coniophora cerebella*.

Apparently, then, the only way clean timber can be attacked is by the established plant spreading its lacelike mycelial tendrils over sound timber. But the very fact that there is a double enemy within the gates working hand in hand adds to the complexity of the problem, and should not be viewed with complacency by architects.

It raises the question at once as to whether unclean forestry may not be a source of dry rot.

Professor Groom appears to think it an established fact that the fungi causing grave dry rot are different from those attacking standing trees, but it would be interesting to know whether any of the fungi which attack the live tree may be like *Coniophora cerebella*, the precursor of dry rot.

If so, the present legal position as regards architects' responsibility would be Gilbertian in its humour if it were not so serious.

Professor Groom came to the end of his hour's lecture without dealing with the legal aspect of the matter or with the question—equally interesting to architects—of the anti-septic and toxic treatment of dry rot, but at the suggestion of the chairman he touched upon the subject for a few minutes.

Many treatments were mentioned, more or less efficient, including our friend corrosive sublimate, and also dinitrophenolate of soda. This latter is recommended by Flack as the most powerful and cheapest fungus poison.

From enquiries made by the writer, the price of dinitrophenolate of soda is about the same as corrosive sublimate, with the advantage, according to Flack, that one-twentieth of the quantity of the former need be used as compared with the latter.

The suggestion, however, is not practicable at present, as, although large quantities of dinitrophenol are made, the soda salt is not commercially obtainable, but would have to be made specially.

This could be done, and a stock could be kept if there was likely to be a demand; but if the proportions advised by the German investigator are correct, the anxious architect would only require an ounce at a time of this chemical with the long name.

It is therefore to scientific experts like Professor Groom that we must look to tell us whether it is worth while to stir up the manufacturing chemist to make something for us specially, or whether corrosive subli-



DRY ROT IN PARTITION.

mate and other things commercially obtainable are not sufficient for the purpose, even if the cost is a little more.

It is interesting to note that in the use of corrosive sublimate the German practice seems to be 1 part in 1,000, whereas our rule of thumb appears to be 1 ounce to a gallon, which is 1 in 160.

I suggest that ordinary dry fresh air is perhaps one of the best things to make use of in combating dry rot. The accompanying illustration of dry rot in a partition is an excellent example of this.

When the plaster work was removed the timbers were hardly visible on account of the fungus. The weather was dry and windy, and there was no sash in the window opening.

The photographs were taken within 24 hours, during which the growth had shrivelled up very perceptibly: in three days the dry rot was withered and shrunken past recognition, and although the fungus was, of course, still full of life, the fresh air almost seemed to have blasted it.

Professor Groom is to be congratulated upon obtaining an individual grant from the Committee for Scientific and Industrial Research with respect to the further investigation of timber diseases.

The investigation could not be in better hands, and seeing that no objection is raised by the Privy Council to a research worker publishing the results of his research from time to time as he thinks fit, it is to be hoped that Professor Groom may be asked to continue his lecture at the R.I.B.A., and deal more specifically and in detail with those points which are of peculiar interest to architects.

In addition to the legal position and the use of preventatives and toxic materials, one would like to hear more:—

(1) As regards the way in which each species reacts to various sterilising media, for I suggest that it is by no means certain that what is sauce for the goose is sauce for the gander.

(2) As regards the partiality of various kinds of fungus for various kinds of timber.

(3) As to whether *Merulius sylvester* and *Merulius minor* require any attention—they are mere names to me.

(4) Whether it would be possible, by inoculation of the tree in the forest in the spring before felling, to render it reasonably immune from fungoid disease afterwards. I know that botanists are not encouraging as to this, but the investigation might be worth making.

This, perhaps, is more a question of forestry, but being so it shows that the treatment of the live and dead tree cannot be regarded as entirely separate investigations.

In conclusion, I cannot help thinking that there was something in Mr. A. O. Collard's question as to whether it would not be possible for architects to send their dry rot samples and questions to some competent authority for examination and advice. Architects are not all-round scientific experts, and Professor Groom is doubtless much too busy to add to his programme; yet in any decently civilised and organised community bad and important cases of dry rot would come automatically before the scientific expert who specialises in such matters: this is doubtless a counsel of perfection.

Correspondence

REGISTRATION AND UNIFICATION.

Guildhall, E.C.

17 November 1921.

To the Editor, JOURNAL R.I.B.A.,—

SIR,—I was one of the men who voted in March 1920 for the general principle of Registration and Unification. Members were informed at that meeting by the President that "the Resolutions before the Meeting did not commit them to any definite scheme or policy, but merely provided the machinery for preparing and submitting one to the Institute."

I am glad to see Mr. Keen's letter in the JOURNAL of the 12th inst., but I do think he might have given us a little more information, which, however, I am happy to supply.

Under the 1914 scheme (which is printed in the R.I.B.A. JOURNAL of 31 December 1913, page 429) a Register was to be formed including men who were not members of the R.I.B.A., and the fact that they would be on the Register *would not make them members of the R.I.B.A.* But the scheme of the Unification and Registration Committee is vastly different, for that Committee wants us to approve "the principle of . . . bringing all the architects of the United Kingdom into membership of the R.I.B.A."

This proposal has never been submitted to the general body of members, and cannot be carried out until it is and until we approve it. It is not a matter for the Council to decide, and, judging from the large number of letters I receive from all parts of the kingdom, the opposition will be considerable, and I think Mr. Keen will find that Mr. Hiorns' remarks *do* "represent the feeling of many of our members in relation to this matter," only they express themselves much more forcibly.

Mr. Keen states that it is not intended to admit men "without reference to their qualifications," so I presume we may rely on his voting against the resolution I quote above, for it makes no reservation on the point he considers so important.

"The R.I.B.A. Constitution League" has been formed to oppose the admittance, before the passing of a Registration Act, of new members to the R.I.B.A. except in accordance with the present system of examination; our views are fully stated in the JOURNAL of 27 August 1921, p. 556. We are not opposed to Registration. Any member writing to either of our Vice-Presidents, Mr. A. W. S. Cross or Mr. H. D. Searles-Wood, or to Mr. George Hubbard or myself, can automatically become a member; there is no subscription. Associates are particularly invited to join, as their position is so critical under the scheme. We have only had three meetings and already have a hundred members.—Yours obediently,

SYDNEY PERKS [F.].

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UNIFICATION AND THE INSTITUTE.

*St. John's Wood, N.W.3.
16 November 1921.*

To the Editor, JOURNAL R.I.B.A.,—

SIR,—Mr. Keen has dealt quite kindly with me. I value his and others' opinions too highly to wish to be misunderstood and appear either obstructive or unfair. I can at once agree as to the general desire at the Institute for the registration of architects—which I had no intention of questioning—and to what appears to me to be the willingness of members to assist in effecting what the majority desire. As perfectly reasonable people we want an end to disagreement and controversy. It did, and does, however, seem to me debatable whether the admission of *all* architects into the Institute (which was what the Council was understood to approve) could be recognised consistently with the aims and principles we profess; and, casting a side-glance at De l'Orme's "bad architect"—whom obviously our Register, when it comes, is intended to destroy—it struck me that one aspect, if only a limited one, of the Council's scheme savoured of smiting the poor man with one hand while offering him a diploma with the other, though, sad to say, the charming woodcut shows that, being without hands, as well as blind, he is in no position either to resist or accept. And there is no doubt in my mind that inclination would lead me to spare him the necessity to do either.

Mr. Keen will not need me to say that the anxiety some of us feel in the matter is perfectly genuine, and results from the same sense of pride in the Institute that he undoubtedly has himself. I gather comfort from his assurance that the points which cause us concern are being fully considered by those dealing with the matter. And I hope that Mr. Keen is one of them, for we do not fail to associate him with whatever is best.—Faithfully yours,

FREDERICK R. HORN [A.].

THE GOVERNMENT'S FUTURE HOUSING POLICY.

*15 New Bridge Street, Ludgate Circus, London, E.C.4.
17 November 1921.*

To the Editor, JOURNAL R.I.B.A.,—

SIR,—I shall be grateful for permission to trespass upon your space for a few lines (final as far as I am concerned) by way of reply.

Referring to Mr. John E. Yerbury's letter of 27 September, I never suggested that "we should not criticise the Government unless we are prepared to do their work," but I meant it to be implied that if the Government Housing Scheme were scrapped there was no prospect of the necessary houses being provided by existing agencies under existing conditions, and that a practical alternative scheme had not only to be devised, but (more important and difficult still) brought into operation.

Moreover, will not architects as a body demur to Mr. Yerbury's suggestion that the provision of housing is work for the Government and not for us?

My letter of 30 August (September JOURNAL) was inspired by (to quote Mr. Yerbury again) "the bald and bold statement" (which he says "neither the Council nor any individual architect has made") in Mr. James Ransome's letter of 26 July (July JOURNAL) in which he advocated "insistence upon freedom of private enterprise to erect such houses as our countrymen need and can afford to possess," unqualified up to then by his suggestions of 6 October (October JOURNAL).

My letter was deliberately intended to provoke criticism, in which it has succeeded, with some advantage, I hope, but I fear without much prospect of any practical result.

There appears to be general agreement with my postscript (that the provision of sufficient houses must wait for a drastic reform of our whole system of local taxation, etc.), which I did not write with surprise, as Mr. Yerbury assumes, but rather with a feeling of consternation amounting almost to despair.

Mr. Yerbury makes a very strong case against the Government for its neglect of information at its disposal, but disregard of valuable (and often very expensive) reports embodying expert opinions has always been a besetting weakness of Governments.

The upshot is that the only hope of putting the supply of houses on a satisfactory footing involves important legislation of a controversial character, material for which exists, but is buried in departmental pigeon-holes.

To repeat my former question in a somewhat different form: Is it not a most urgent duty of the Institute and the profession to press this upon public attention, and to continue to do so until the Government takes effective action?

Even Mr. Yerbury at the end of his letter makes suggestions which must in effect fall into line, in spite of the adverse criticism in his opening paragraph.

Unfortunately, the architectural and allied professions seem to lack power such as the legal and medical professions occasionally exercise to influence Governments in the right direction.—Yours faithfully,

ALEX. P. DURLACHER [F.].

DOMINION BRANCHES OF THE INSTITUTE.

*14 Phillips Square, Montreal,
3 November 1921.*

To the Editor, JOURNAL R.I.B.A.,—

DEAR SIR,—In the September issue I see a letter from Mr. G. A. T. Middleton, under the caption "Why Not Dominion Branches of the Institute?" The reasons why not are so numerous, so obvious to members of the Institute outside the British Isles, so

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obscure to many of those "who only England know," that I should have to trespass on many of your valuable columns if I tried to answer fully the question with the graces and courtesies one is accustomed to find in your pages. I must therefore be abrupt, but I hope accurate, and will confine myself to the situation in Canada.

A. (1) There are, in Canada, six provincial architectural associations.

(2) These comprise a total membership of just 600 practising architects.

(3) The provincial associations work under provincial charters; they affiliate under the Royal Architectural Institute of Canada, a proportion of all members' dues being paid to that body, which has thus 600 members.

(4) The Royal Architectural Institute of Canada does not examine; some of the provincial associations do.

(5) When all the provincial associations have charters closing the profession, the R.A.I.C. will probably become an examining body—say fifty years hence.

(6) The R.A.I.C. describes itself as in affiliation with the R.I.B.A., and the R.I.B.A. remits to it a portion of its fees.

B. (1) There are, in Canada, 53 Licentiates R.I.B.A., 38 Associates R.I.B.A., 13 Fellows R.I.B.A.—i.e., 17 per cent. Canadian architects are members of the R.I.B.A.

(2) A special examination for A.R.I.B.A. has been held in Canada for many years, but no preliminary or intermediate examinations.

(3) Those who pass the R.I.B.A. examinations are exempt from examination by provincial associations.

(4) Some who qualify for A.R.I.B.A. in Canada never go forward for admission as Associates.

C. (1) There is little inducement for Canadian architects to become or remain members of the R.I.B.A., as the R.I.B.A. has never done anything for its members in Canada except send them the JOURNAL in exchange for its fees.

(2) Within Great Britain members of the R.I.B.A. are encouraged to observe certain decencies in the matter of professional etiquette among themselves by admonition, and occasionally by corporate action.

(3) Members in Canada are not in any way protected by the R.I.B.A. against the adoption by fellow members of aggressive standards of business ethics.

These things being so, the answer to Mr. Middleton's question is, perhaps, "Why bother?"

There are two missions which the R.I.B.A. might perform throughout the Empire, if it is prepared to act in a purely altruistic way, so far as the interests of its members resident in Great Britain are concerned; and I trust I have made it clear that it does not act in the interest of the members in Canada. These missions are, firstly, to set and support a decent standard of professional ethics among its members, and, secondly, to

maintain and propagate what is characteristic in the national tradition of design.

Now, some of us everywhere are inclined to think that the last notes struck under R.I.B.A. auspices in the matter of architectural education are not calculated to perpetuate, but to destroy, what is best and most characteristic in our national traditions as to design. Some of us in Canada, moreover, are also inclined to think that if the R.I.B.A. takes our subscriptions it ought to invent some machinery for the maintenance of professional standards of conduct among its members here.—I am, yours faithfully, PERCY E. NOBBS: [F.].

95 Town Hall, Johannesburg, S. Africa.
19 October 1921.

To the Editor, JOURNAL R.I.B.A.—

DEAR SIR,—Mr. G. A. T. Middleton's letter in your issue (24 September last) will awaken response from many overseas members. Speaking as one born in Australia and whose working life has mostly been spent in Africa, the writer can feel, for the overseas point of view, an intelligent interest. The old Institute has won for itself a supreme place in the minds of all English-speaking architects all over the world, and it is regarded as an honour to be enrolled on its register; nevertheless, its constitution and habits are more English than British and more British than Imperial, in the sense of being fully abreast of great architectural movements in overseas countries. In fact, one hardly ever sees anything in the JOURNAL of work, say, in Africa or Australia or New Zealand, and I can call to mind no instance of an article being published from any of these great Dominions. I mention the JOURNAL advisedly, as it is the main link between us, and one could hardly imagine the Institute continuing to hold its sway without its valued paper. Distant men have no personal knowledge of the men who run the Institute, and it is not likely that the majority will ever have sufficient spare means to give them a trip home to participate in the privileges which the Institute enjoys in London.

I think Mr. Middleton's suggestion that the President should be sent round to, at least, the greater Dominions an excellent one. The local Institutes everywhere would be delighted to treat him as a guest, and the expense of travelling round the world, say, once every five—or even ten—years could be easily met by the Institute. If not the President, then the immediate Past-President, fully and solemnly invested with powers of delegation. My own feeling is that our chief leaders at home have but small conception of the work in the Dominions.

In Africa the influence of the R.I.B.A. is greater than in Australia. This is because a larger proportion of our men are home-born and because we are not so far away.

Now, as regards Mr. Middleton's definite suggestion of Branches, these are hardly needed, as local Institutes exist which fill local needs, and are kept in alliance with

the R.I.B.A. by definite acceptance by the latter; and I understand the R.I.B.A. may raise objection to any by-law they may pass if not in accord with its own charter and policy. Beyond this I do not think it is easy or necessary to proceed, as it will accomplish no closer union than now exists, and may even be a danger to the R.I.B.A. by reason of a sometimes lower local standard of admission, or if by examination (which is not common) a lesser degree of proficiency. The R.I.B.A.'s traditional policy is excellent, and she should now, as before, be the first among equals and the leader of architectural thought and movement, but she should keep herself free.

What is certainly necessary is a modern thought in regarding the former colonies—now Dominions—as sister nations. I wish, in reference to this, to make certain suggestions. First, that in the award of the Royal Gold Medal the assessors should take more notice of the great Dominions. Such a medal has never been awarded to a person in Australia, New Zealand, or Africa. I do not argue for a geographical selection, as the award is on architectural merit; yet with fairly travelled experience of the United Kingdom, Africa, and Australia, I feel that it is possible to select an occasional man overseas who would honour the Medal. The Empire possesses no better collection of good architecture than can be found in a city like Melbourne. If the Royal Gold Medal cannot so be occasionally bestowed, then why not have a Dominion Medal from the Institute either yearly or every three years?

My next suggestion is that members in each Dominion should appoint members of Council of the R.I.B.A. for their own areas, as is done by members of the Institution of Civil Engineers. These persons could deal with local applications for membership and forward them to the R.I.B.A. with any necessary report. The posts would be an honour to those elected and provide a vital link needed in the administration. The Colonial Secretaries of the R.I.B.A. could retain their present posts till death or resignation, after which no more would be appointed.

My third and last suggestion is that, say, once a year these Dominion Councillors of the R.I.B.A. should appoint or invite a member or other suitable person to contribute to the JOURNAL an article on the architecture of their country or Dominion, and so keep British opinion abreast of Dominion work, just as the paper now informs us overseas members of British movements and work.—Yours faithfully, EDWARD H. WAUGH [A].

[Mr. Waugh is a Past-President of the Association of Transvaal Architects. He is President of the Board of Examiners appointed to admit persons to practise as architects; he was also the first chairman and editor of *Building*, the quarterly journal of the Association, and has held other important positions in connection with architecture in South Africa.]

Architects and Architectural Journalism

By W. T. PLUME, Hon. A.R.I.B.A.,

Editor of *The Builder*.

[Extracts from a Paper read before the Liverpool Architectural Society on 22 November.]

The lecturer stated that the object of his Paper was to try to establish a closer relationship between architects and the architectural press, as distinct from the political press. The architectural press had a more or less limited artistic, professional, and trained public which had to be supplied with matter specially concerning it, which matter was rarely of any interest to the daily political press, because the general public had a very incorrect idea of what architects were or what architecture was.

Architecture had been defined as a business profession and an art, and a recent writer—an architect—had said that no more than 10 per cent. of an architect's work came under the definition of art. If this expressed the facts, we got an indication of the relationship which must, as things were, exist between the architectural press and its public and the extent of the influence of that press with both architects themselves and the public at large. If it were a business, a profession, and an art, then artists must not be surprised if they found business considerations formed some part in the kind of architectural journal produced, and business and professional men must expect to find that the art side of their work took its place too.

One criticism urged against the architectural press was that it too often illustrated badly designed buildings and that it should publish nothing but good work. Certain works of the past always excited our admiration, and there were many fine buildings erected in our own time which would probably be as much admired by posterity as by us. But there were others, and of those it might be said that they served their purpose, that they were conveniently planned, that they satisfied the by-laws and the client—that they were, in fact, the outcome of certain inflexible laws which had not left the architect free, and which, in fact, had often stultified his effort. Should they not have recognition as the earnest efforts of living architects? As completed works we could not shut our eyes to them, and, whether they were published in the press or not, the public, including architects, saw them. On the whole, it appeared to be a fairer and more logical policy to illustrate work which had been or would be carried out, and leave the profession to judge it as it might. It might be a stimulus to some if good; and if bad, it would serve to indicate the need for

improvement in the quality of design. He appealed for a little more public spirit on the part of architects who were responsible for the best modern work, but who here and there withheld it from publication. By their work and the standard they set their influence was considerable, and by its publication they could do much to improve the quality of design.

The architectural press had played its part not only in assisting men in their work by what it printed and illustrated, but by the prominence which it had given to the work of young and unknown men—and even well-established men too. That this assistance was recognised, acknowledged, and valued by most architects he knew; but there were those who had profited greatly by this publicity who did not remember the first stages of that success, and how much they had benefited in their time by seeing the published work of leading men and in having their own work seen by others.

The architectural press appreciated the greatness of the architect's profession and the importance of the building crafts, and it was willing to assist to the fullest extent in broadening and extending public appreciation so that in time the public would understand how important to them was the work of architects. That the public did not realise this to-day was, he feared, the architects' fault rather than that of the press; but that was no reason why they should not work together to create this understanding and secure at least as much appreciation for fine building as was shown by the American public. The education of the public could not come before the proper education of the architect. If the architects were qualified to lead, the public would follow.

Fees Payable to District Surveyors under the London Building Acts

A matter of interest to architects, builders and owners is contained in the London County Council (General Powers) Act 1921, which received the Royal assent on 28 July 1921.

By section 26 (1) of this Act, "all fees payable to district surveyors under or in pursuance of the London Building Acts 1894 to 1920 or under any bye-laws" are increased by 25 per cent. The London County Council are by section 26 (2) of the Act empowered to make a further increase of the fees, "not exceeding a further 25 per cent.," and the Council has given notice (*London Gazette*, 9 September 1921) that, in the exercise of its powers under the Act, it has decided that all fees payable to the district surveyors under or in pursuance of the London Building Acts 1894-1920, or under any bye-laws, shall be increased as from 1 October 1921, and until further order, by 25 per cent. in addition to the increase of 25 per cent. prescribed by the Act.

The 25 per cent. increase granted by the London County Council may be varied from time to time by the Council, in which case a further public notice must be given.

A point of special interest is dealt with in section 26 (4) (A) of the Act, and might be referred to as the "fee for small works on large buildings." The fee—termed "the appropriate fee"—is based upon the cost of the "addition, alteration or other work," and varies from £1 1s. for work not exceeding in cost £25, up to £8 8s. for work exceeding £400 and not exceeding £500 in cost. This "appropriate fee" is payable in substitution of the increased fees above mentioned, and is only applicable to an addition, alteration or other work for which a fee is payable under Part I. of the Third Schedule of the London Building Act 1894 and increased by or under the Act of 1921, and not to other works or services performed, for which a fee is payable under other parts of the Third Schedule of the 1894 Act or under the subsequent amending Acts or bye-laws.

The expression "cost" has been defined to mean and include the total cost of and incidental to the addition, alteration or other work; the cost of any work for which a special or separate fee is payable must not be included in the cost of the work to which "the appropriate fee" is applicable.

It should be specially noted that "the appropriate fee" appears to be limited to those cases where a building notice has been duly served on the district surveyor as required by section 145 of the London Building Act 1894, and where satisfactory evidence of the cost has been produced to the district surveyor within 14 days after completion of the addition, alteration or other work.

The operation of the Act so far as it relates to increased fees and the appropriate fee, etc., will cease on 31 December 1926, and it is understood that in the meantime the Council will introduce into Parliament a Bill to make provision as to the fees to be payable after that date to district surveyors.

Ulster Government Buildings

In August last the President of the Royal Institute of British Architects and a few members of the Council were invited to attend at H.M. Office of Works. As a result of that meeting it was, by the agreement of the architects present, left to the President to give to the First Commissioner the advice which he required to obtain from the Institute. In view of the fact that the Government had decided that a competition was for various reasons inadvisable and impracticable, the President took the course of laying before the First Commissioner a comprehensive and very carefully selected list of capable and available architects in Great Britain and Ireland. Several of the gentlemen whose names were submitted will be aware, owing to a private

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communication from the President, that their names were included in the list, but others—in fact, the greater number so included—received no intimation that their names were under consideration.

STATEMENT IN PARLIAMENT.

Sir J. Gilmour stated, in a written Parliamentary reply, on 10 November, that the First Commissioner had invited Mr. Ralph Knott, F.R.I.B.A., to design and execute the public offices in connection with the Civil Service of the Northern Irish Government. He had also invited Mr. Arnold Thornely, of the firm of Messrs. Briggs and Thornely, to execute the Parliament House. Both these architects had consented to undertake the work, which would be begun as soon as circumstances permitted.

THE ROYAL INSTITUTE OF THE ARCHITECTS OF IRELAND.
31 South Frederick Street, Dublin.
10 November 1921.

To the Editor, JOURNAL R.I.B.A.,—

SIR,—In view of the reply by Sir John Gilmour to a question asked by Mr. Reid in the House of Commons on 28 October, my Council, at their meeting on 7 November last, passed the following resolution:—

"That the Council of the Royal Institute of the Architects of Ireland are of opinion that the designs for the proposed buildings should be made the subject of an open competition, and that copies of the resolution be forwarded to the First Commissioner of Works, the Press, and the Royal Institute of British Architects.—I am, Sir, your obedient servant,

A. BUTLER,
Assistant Secretary.

RETIREMENT OF R.I.B.A. OFFICIALS.

The following Resolution was ordered to be entered on the Minutes:—

Resolved, that the Council of the Royal Institute of British Architects do hereby place on record their deep appreciation of the loyal and devoted service rendered by Mr. H. G. Tayler and Mr. George Northover during their long connection with the Royal Institute.

THE PERMANENT STAFF OF THE ROYAL INSTITUTE OF BRITISH ARCHITECTS.

Mr. H. Godfrey Evans, B.A. (Cantab.), has been appointed Assistant-Secretary of the Royal Institute, and Mr. James Haynes, B.A. (Oxon.), has been appointed Secretary of the Board of Architectural Education.

Mr. Evans, who is in his twenty-ninth year, was born in Buenos Ayres, and educated at King Edward VI School, Norwich, whence he proceeded to Cambridge as a Classical Exhibitioner of Queens' College, where he obtained his degree with Second Class Honours in

the Classical Tripos, part I. Mr. Evans played for his College at Rugby football and cricket and in the Freshmen's match at hockey.

After training with the O.T.C. at Cambridge, Mr. Evans obtained a commission in the R.A.S.C., and proceeded with the 21st Division to France in September 1915. Transferring to the Rifle Brigade, he was attached to the 3rd Battalion, and when that unit was associated with the 8th Royal Surrey Regiment in the memorable defence of Le Verquier, on 21 March 1918, he was wounded, after which date he saw no further active service.

Mr. Haynes, who is in his twenty-third year, was educated at Merchant Taylors' School, and in 1916 he obtained 40th place out of 1,000 candidates in the Army Entrance Examination for Sandhurst. He was for some time at the Royal Military College and later, preferring Artillery work, passed through the First Artillery Cadet School and obtained his commission in 1918. He was then posted to the Royal Horse Artillery at Woolwich, and afterwards served for some months in France in the 7th Brigade Royal Horse Artillery, First Cavalry Division. On demobilisation Mr. Haynes proceeded to Hertford College, Oxford, and graduated as Bachelor of Arts in 1921 with Honours in the School of Jurisprudence. He identified himself very fully with the life of the University, and rowed in his College Torpid for one year and in his College Eight for three years, and was also tried for the 'Varsity Eight.

Miss E. H. Mann, M.A. (Aberdeen), has been appointed Assistant Secretary of the Architects' Benevolent Society.

The Librarian, at the request of the Council, has also recently undertaken the Editorship of the Institute *Journal*.

REINSTATEMENT OF MEMBERS.

Mr. Cyril Edward Power has been reinstated as an Associate.

Mr. George Walesby Davis has been reinstated as a Licentiate.

IRON PORTLAND CEMENT SUB-COMMITTEE.

Mr. H. D. Searles-Wood has been appointed representative of the Institute on the Iron Portland Cement Sub-Committee of the British Engineering Standards Association.

THE REGISTRATION OF ELECTRICAL CONTRACTORS.

Mr. Alan E. Munby has been appointed to represent the Institute on the Committee representative of the Institution of Electrical Engineers, Electricity Supply Undertakings, Electrical Contractors and Electrical Manufacturers to enforce a national standard set of wiring rules.

Competitions

SOUTHEND-ON-SEA. PIER PAVILION IMPROVEMENT.

The Competitions Committee desire to call the attention of Members and Licentiates to the fact that the conditions of the above competition are unsatisfactory. The Competitions Committee are in negotiation with the promoters in the hope of securing an amendment. In the meantime Members and Licentiates are advised to take no part in the competition.

LEYE SCHOOL, CAMBRIDGE. COMPETITION FOR CRICKET PAVILION AS WAR MEMORIAL.

The Competitions Committee are in negotiation with the promoters.

AUCKLAND WAR MEMORIAL COMPETITION.

The revised conditions are now available for inspection in the Library.

BOROUGH OF HARROGATE WAR MEMORIAL.

The Harrogate Corporation invite architects to submit competitive designs and estimates for a War Memorial, to be erected on a site now known as the Prospect Crescent Gardens, which was recently purchased for the purpose of street improvement, and on which it is proposed to erect a monument to commemorate the period of the war from 1914-1918. Provision should be made for a tablet to contain, approximately, 800 names. The total cost, including all the necessary foundations, lay-out, etc., should not exceed £5,000. The President of the R.I.B.A. will be asked to officiate as assessor, or to nominate three gentlemen for the Committee to select from as assessors to advise the Corporation as to the merits of the respective designs. Premiums: First, £100; second, £50; third, £25; but if the premiated design is carried out, the amount of the premium shall merge in the commission of £6 per cent. on the actual cost of the work. Designs, reports, etc., must be addressed to the Borough Engineer, Municipal Offices, Harrogate, not later than 1 December 1921.

COUNTY BOROUGH OF HASTINGS. COMPETITIVE DESIGN FOR MUSIC PAVILION.

Competitors are invited to submit drawings in competition for the proposed new Pavilion, to be erected on a site on the Front opposite the East Pier. The total cost of the building, including foundations, drainage, lighting, heating, and any boundary railing that may be necessary, but exclusive of furnishing, is not to exceed £60,000. Premiums: First, £150; second, £100; third, £50. Drawings and report must be forwarded to the Town Clerk, Hastings, not later than 30 November 1921. Questions and replies may now be seen in the Library.

COMPETITIONS OPEN.

The "Daily Mail" Labour-Saving House Competition.
Hastings Music Pavilion.
Harrogate War Memorial.
Paisley War Memorial.
Auckland War Memorial.

The conditions and other documents relating to the above competitions may be consulted in the Library.

Examinations

EXHIBITION OF DESIGNS.

It has been decided that an Exhibition of the Designs of those candidates from the "Recognised Schools" claiming exemption from the Final Examination under the new conditions be held in the middle of July each year, and that a Special Meeting of the Board of Architectural Education be held for the purpose of inspecting the designs.

EXAMINATIONS IN INDIA.

A Special War Examination will be held in Bombay for the benefit of candidates residing in India.

THE LONDON UNIVERSITY SCHOOL OF ARCHITECTURE.

On the recommendation of the Board of Architectural Education, the Council of the Institute have decided to recognise the five years' Diploma and Degree courses of London University as exempting from the Final Examination of the R.I.B.A., on the usual conditions.

STATUTORY EXAMINATION FOR DISTRICT SURVEYORS.

Mr. H. R. Chanter was granted a certificate of Competency to act as District Surveyor.

ALTERATION IN QUALIFICATIONS FOR REGISTRATION AS PROBATIONER.

Applicants desirous of qualifying for Registration as Probationers R.I.B.A. must in future produce three and not more than four sheets of drawings showing an elementary knowledge of Geometrical, Perspective and Freehand Drawing, instead of examples of Geometrical or Perspective and Freehand Drawing.

ARCHITECTS' AND SURVEYORS' ASSISTANTS' PROFESSIONAL UNION.

Representations are being made to the Ministry of Labour by the Council of the Institute in support of the claims of the Union in the matter of unemployed assistants.

Allied Societies

BIRMINGHAM ARCHITECTURAL ASSOCIATION.

The second general meeting of the Birmingham Architectural Association was held at the Society of Artists' Rooms, New Street, Birmingham, on Friday, 18 November. Mr. H. T. Buckland, F.R.I.B.A., took the chair, and Mr. F. G. Minter, a London contractor, read a paper entitled "A Contractor's Views on Contracts and Architects."

Mr. Minter said that it was certain that a body of architects would not at first agree with the suggestions which he would put forward; for if they did, it would mean that we had reached that ideal state of society for which we were all striving, and to which he thought we should never attain.

It should be remembered that every contract depends on three persons—the client, the architect, and the contractor. The client desires a building to meet his requirements, but often he does not consider the appearance of the building if it serves his purpose. He also wishes to obtain his building at the lowest price possible commensurate with the standard of finish that will suit him. The architect should be justice personified, and hold the balance evenly between the client and the contractor. The duty of the contractor is to erect a building in accordance with the instructions of the architect.

There are two types of contract in vogue at the present time. One is the usual lump sum contract, and the other the percentage or fee contract. With the lump sum contract, the client is supposed to get a competitive price and to know exactly how much he will spend. In practice this rarely works out accurately. Unexpected difficulties may arise even before the foundation walls are above ground. In settling up an account long periods of time frequently elapse before the final settlement takes place, and the contractor, anticipating this, is forced to estimate at a higher figure.

With the percentage or fee contract, time is saved in preparing an elaborate bill of quantities. The fee is naturally governed by the amount, and gives the contractor a real interest in getting the work done economically. A clause could be inserted that if the work could be completed under a certain amount, the client and contractor should share in the saving.

Concerning sub-contractors, Mr. Minter said that firms are often called in whose work is not of the standard of the general contractor, and who prove a great nuisance and a source of delay. They should be bound by the same conditions regarding time and payment as the general contractor.

Mr. Minter, in continuing, suggested that it would make a good practical finish to a young architect's training to spend six months with a firm of contractors, as it would enable him to see things from both points of view.

A quantity surveyor can often prevent dispute over contracts if he is a good business man who understands his architect's eccentricities, and provides for them in his estimate.

With regard to the new form of contract which the two Institutes in London are trying to arrange, the builders will be very pleased when they can have a model form of contract. The L.C.C. have one at present in which there is the usual retention clause for maintenance. This money they place on deposit at an agreed bank in joint names, and all interest on it is paid to the contractor, together with the retention money, on satisfactory completion of the work. This might be well adapted to all contracts over a certain figure.

Mr. Minter, in concluding, said the slump in building trades could be for want of capital, as instanced by the £20,000,000 Local Loans that the Government recently issued. The whole amount was subscribed in twenty-four hours. It must be due either to the want of confidence in the existing order of things, or else to the belief of the general public that profiteering is going on. The latter Mr. Minter denied, and showed what measures he had taken to break up this idea.

Notices

APPOINTMENTS UNDER SEAL.

The Council, on the recommendation of the Practice Committee, desire to call the attention of members to the following extract from the last annual report of that Committee:—

"Members appointed as architects by public authorities or other corporate bodies should insist on the appointment being made under seal . . . the Committee feel very strongly that a large proportion of members are not as businesslike as they should be, in their own interests, in regard to these matters."

ELECTION OF MEMBERS, 9 JANUARY 1922.

The following applications for election have been received. Notice of any objection or other communication respecting the candidates must be sent to the Secretary for submission to the Council prior to Monday, 19 December 1921.

AS FELLOWS (2).

BENNETT: THOMAS PENNERETHY [A. 1912], 12 and 41 Bedford Row, London, W.C.1; 12 Bedford Row, London, W.C.1.
FOSTER: REGINALD CHARLES [A. 1909], Council Offices, Buckhurst Hill, Essex; "Casa," Monkham Lane, Woodford Green, Essex.

AS ASSOCIATES (4).

BASTO: ANTONIO HERMENEGILDO DE SENNA FERNANDES [Final Examination], 46 Cambridge Road, London, S.W.11.
FORSHAW: JOHN HENRY, M.C. [Special War Examination], Merridale, Burscough Road, Ormskirk, Lancs.
POPE: CLEMENT LAWRENCE [S. 1914—Special War Exemption], "Sunny Brae," Moorside Road, West Moors, near Wimborne, Dorset.
SHEPPARD: EVERARD [Special War Examination], St. Helens, Barnmead Road, Beckenham.

ELECTION OF MEMBERS, 6 MARCH 1922.

The following applications for election have been received. Notice of any objection or other communication respecting the candidates must be sent to the Secretary for submission to the Council prior to Monday, 6 February 1922.

AS ASSOCIATES (2).

KERR: JAMES AUBREY [Special Examination], 35 Morton Street, Wollstonecraft, Sydney, N.S.W.
OSBALDISTON: GEORGE ALBERT [Special War Examination], "Kalimna," Milton Road, Auchenflower, Brisbane, Australia.

At a General Meeting of the Royal Institute of British Architects on Monday, 19 December, at 8 p.m., Mr. Thomas E. Colcutt, Past President of the R.I.B.A. and Royal Gold Medalist, will read a Paper entitled "A Plea for a Broader Conception of Architectural Education."

R.I.B.A. JOURNAL.

Dates of Publication.—1921: 12th, 26th November; 10th, 24th December. 1922: 14th, 28th January; 11th, 25th February; 11th, 25th March; 8th, 22nd April; 6th, 20th May; 3rd, 17th June; 15th July; 19th August; 23rd September; 21st October.

Members' Column

APPOINTMENTS WANTED.

A.R.I.B.A., whose carefully nursed practice passed away peacefully six months ago and shows no signs whatever of blooming afresh, seeks situation as assistant to architect in London or abroad. Design, surveys, working drawings, perspectives and the business side. Or would assist architects during sudden rushes of work at own office.—Address Box 129, c/o Secretary R.I.B.A.

A.R.I.B.A. desires appointment; is prepared to acquire an interest in established firm after probationary period. Eighteen years' varied experience. Ex-R.A. Schools student. Would join architect in competition or speculative work on mutual terms.—Address Box 1421, c/o Secretary R.I.B.A., 9 Conduit Street, London, W.1.

LICENTIATE R.I.B.A., until recently on "Housing," and with four years' experience in a surveyor's office, would accept post as assistant-clerk of works or building-inspector. Excellent references. Very low salary.—Box 1712, c/o Secretary R.I.B.A.

A.R.I.B.A., M.S.A. (29), desires permanent position; all-round experience; design, specifications, quantities, estimates, working drawings, for banking, institutional, factory and engineering buildings; steel construction; ex-Service; commencing £6 per week; excellent references.—Apply Box 2121, c/o Secretary R.I.B.A.

A young Architect, A.R.I.B.A., desires partnership in well-established firm in the South of England; would probably entertain the purchase of part share.—Apply Box 1219, c/o Secretary R.I.B.A.

ARCHITECT'S ASSISTANT, disengaged; member of Institute; 20 years' experience; F.S. details of original ornament; perspectives in line, colour, or pastel; interior and exterior decorative work. Salary moderate.—Box 2501, c/o Secretary R.I.B.A.

A.R.I.B.A. (30) seeks re-engagement as draughtsman or surveyor in London; designs; specifications and superintendence of work in progress; special knowledge of factories and engineering works; wide London experience; accustomed to take charge of office; reasonable salary.—Box 222, c/o Secretary R.I.B.A.

FULLY QUALIFIED ARCHITECT (41), 14 years' practice; experience specialising in up-to-date economical factory and industrial buildings; versatile in the planning and designing of buildings of a general and business character; desires to help or co-operate with another architect on mutual terms, or would accept position as salaried partner; expert designer and rapid draughtsman; accustomed to make calculations for and design own economical steel construction work, reinforced concrete foundations, rafts, etc.; excellent recommendations.—Box 502, c/o Secretary R.I.B.A.

ARCHITECT, Fellow, 20 years' practice pre-war, desires an introduction with a view to the purchase of a partnership with Architect or firm of unquestionable standing in the profession, and having large and important works on hand and in prospect. Information as to social position, capabilities regarding the handling of large contracts and works of importance, and influencing such may be exchanged at a conference. A capital of £5,000 (not more) will be invested in the practice. London preferred.—Apply Box 2411, c/o Secretary R.I.B.A., 9 Conduit Street, London, W.1.

Minutes II

At the Second General Meeting (Ordinary) of the Session 1921-1922, held Monday, 21 November 1921, at 8 p.m.—Present: Mr. Paul Waterhouse, *President*, in the Chair; 22 Fellows (including 5 members of the Council), 32 Associates (including 2 members of the Council), 10 Licentiates, and numerous visitors—the Minutes of the Meeting held on 7 November 1921, having been taken as read, were agreed as correct.

The Hon. Secretary announced the decease of:—Briggs: Frank Gatley, *Fellow* 1900; Ford: George McLean, *Associate* 1892, *Fellow* 1908; Goldie: Edward, *Fellow* 1904; Hunt: Frederick William Hugh, *Associate* 1868, *Fellow* 1881; Lechmere-Oertel: Frederick Oscar, *Associate* 1888, *Fellow* 1901; Littlewood: William Henry, *Associate* 1882, *Fellow* 1888; Monro: James Milne, *Fellow* 1906; Owen: Joseph, *Fellow* 1905; Barlow: William Tillott, *Associate* 1894; Buckley-Jones: James Alfred, *Associate* 1899; Rournieu: Reginald

St. Aubyn, *Associate* 1877; Cox: G. A., *Licentiate*; Dyson: Ernest William, *Licentiate*; Keech: Edward William, *Licentiate*; Browne: Flint, *Licentiate*; Parker: John, *Fellow* 1902; Bargman: Frederick, *Licentiate*; Cannon: John Wreghitt, *Fellow* 1881; Nagy: Professor Virgil, late *Honorary Corresponding Member*, of Budapest.

And it was RESOLVED that the regrets of the Royal Institute for their loss be entered in the Minutes.

The President formally admitted the following Members attending for the first time since their election:—Tickle: Arthur George Warnham, *Fellow*; Pite: Robert William, *Associate*.

The President called the attention of the Meeting to the fact that Mr. Bertram G. Goodhue and Mr. Donn Barber, of New York, were present, and conveyed to these gentlemen the Royal Institute's welcome.

The President announced that through the generosity of Mr. William Walcot and his publishers a complete set of framed etchings of his classical compositions had been presented to the Royal Institute. A hearty vote of thanks to Mr. Walcot and his publishers was passed.

Mr. George H. Widdows [F.], having read a paper on "School Design" and illustrated it by lantern slides, a discussion ensued, and on the motion of Sir Edmund Phipps, C.B., Principal Assistant Secretary, Elementary Education Branch, Board of Education, seconded by Mr. G. F. N. Clay [F.], Architect to the Board of Education, a vote of thanks was passed to Mr. Widdows by acclamation, and was briefly responded to.

The meeting closed at 9.50 p.m.

At a Special General Meeting held on Monday, 21 November 1921, following the Ordinary General Meeting above recorded, and similarly constituted, the Minutes of the Special General Meeting held on 7 November, having been published in the JOURNAL, were taken as read, and signed as correct.

The President announced that the Meeting had been summoned for the purpose of confirming the Resolutions passed at the Special General Meeting held on 7 November, as follows:

A. *Extension of Premises*.—That the purchase for the sum of £11,000 of the lease (perpetually renewable) of No. 10 Conduit Street, W., be hereby confirmed.

B. That the Council be authorised to create a mortgage on or otherwise to charge No. 10 Conduit Street and the other leasehold and freehold property of the Institute (subject to the existing mortgage) as the Council shall think fit to secure the further sum of £10,000 and interest and to execute such deeds and documents as may be required in connection therewith.

C. *Amendment of By-Laws Relating to Hon. Associates*.—That effect be given to the Resolution of the General Body passed on 28 February 1921—viz., that the number of members in the Honorary Associate class shall not exceed sixty; that the entrance fees and annual subscriptions of Honorary Associates be abolished, and their privilege of voting in the election of Council and Standing Committees be withdrawn.

1. That the following provision be added to By-Law 4: "The number of members in the class of Honorary Associates must not exceed sixty."

2. That Clause (c) in By-Law 17, which provides for the payment by Honorary Associates of entrance fees and annual subscriptions, be deleted.

3. That the following words be added to By-Law 63: "or in the election of the Council and Standing Committees."

4. That By-Law 16, which provides for the transfer of a Fellow who has retired from practice to the class of Honorary Associates, be deleted.

The Resolutions were moved from the Chair and passed by a unanimous vote.

The meeting terminated at 9.55 p.m.



INSTITUTE OF TECHNOLOGY, BOSTON, MASS.
Architect : Welles Bosworth, New York

American Exhibition

ADDRESSES by BERTRAM GOODHUE and DONN BARBER

A MEETING in connection with the Exhibition of American Architecture was held at 9 Conduit Street, London, W., on Friday, 25 November 1921, to hear and discuss addresses by Mr. Bertram Goodhue and Mr. Donn Barber, two American architects. Sir Edwin Lutyens, R.A., presided.

The CHAIRMAN, in opening the proceedings, said : I have nothing to do, ladies and gentlemen, but to introduce to you Mr. Bertram Goodhue and Mr. Donn Barber. I call upon Mr. Goodhue to say what he has to say.

Mr. BERTRAM GOODHUE : Mr. Chairman, ladies and gentlemen,—I would like at the outset to say that I am not a speaker. I love the practice of Architecture and, with all its difficulties, it is one of the most pleasant of lives, but talking about it is quite another matter. I am not at all used to doing it.

It is a very great honour to be asked to explain the purpose and tendencies of what we are trying to do in the United States, but I ask you who have looked over the drawings and photographs here if the task of explaining them is an easy one ? You

will bear with me if I do not succeed in making things clear. To tell the truth, things are not so very clear to me.

Here in England you have traditions, varying, to be sure, in various localities, but all very definite. In America there is scarcely anything of the sort. Here your climate has no great extremes, while with us Florida and Southern California are as different from New England—the Scotland of America—and from the North-Western States of Washington and Oregon as can well be imagined. Furthermore, we have a number of ethnic backgrounds to consider—Puritan New England, French Louisiana, Spanish California, and Florida. So, if you wonder at seeing such a stylistic jumble on the walls here, make more allowances for us than you would, or should, for yourselves. It is true, I think, that we use rather more styles than we are entitled to, but clients—especially lady clients, as Lady Astor hinted the other day—have very decided ideas ; and woman is more powerful, more strongly entrenched in the United States than anywhere else, except, they tell me, in Burmah. So when a

lady client, backed by her husband's wealth, comes into one's office and says she wants a Jacobean, a Georgian, an Italian, a French, or a Tudor house, we do what she tells us, only asking, in fear and trembling, about the path of the sun, the prevailing breezes, the general average of temperature, and such things, that really are more important than the style of the house.

It must be remembered that we American architects are divided into camps—very opposing camps, too. Mr. Barber here, my great friend and capital, though rather strenuous, travelling companion, is a graduate of the *Ecole des Beaux-Arts* in Paris, an institution with whose works some of us are not quite in sympathy—I for one.

Let me present myself with a little nosegay at this point. All my life I have upheld as staunchly as I could the British tradition, and shall continue to do so. It is a melancholy fact, and one that I wish could for ever be kept in the background of the future, that the British element, now forming, perhaps, half of our population, is constantly dwindling, and that the other and—am I right?—less desirable breeds are increasing by leaps and bounds; so that we British—and I am just as British as any of you—will in time lose our supremacy and even, with an unrestricted franchise, our rights. To me England will always be “this sceptred isle, this precious stone set in the silver sea,” but there are others—some five million of them—who have no such sentimental allegiance, no such ancestral bond, to keep them straight.

Here are all sorts of conditions of buildings to look at—State Capitols, churches, schools and houses. I am sorry the plans are not here, too, because, with all my love and admiration for you, I do think that in practical planning we have set a pace—forgive me this—a little faster and a little better—in certain directions, at any rate. Take country houses, for instance. Why, in so many cases here, should the service between kitchen and dining room be made to cross the entrance or staircase hall? It is easy to be too practical, but why do you do this thing? And, too, it does seem to me that our Classic work is better than yours in that it is simpler, more direct and, as a rule, untroubled by pavilions, turrets, rustications and what not. There are exceptions on both sides of that statement. I wrote that rather hurriedly. As soon as my friend Mr. Barber gets up, he will probably tell you that my knowledge of the Classic is of no consequence;

that I am a Gothicismist—which I strenuously deny—and that you must, therefore, discount whatever I may say about the Classic work. But take such magnificent things as Pope's Scottish Rite Temple in Washington, or McKim, Mead and White's New York Post Office. Take these two: are they not quieter, more in the “grand manner” than anything here in London? Is it fair to interrupt myself at this point and except the Cenotaph? I do dislike modern Classic architecture or any architecture where the style is provided by the detail. The “Orders”—or so I think—are now nothing but a veneer, and columns are the surest way of shutting light and air from the windows that come between. Have not we, all of us, everywhere come to regard architecture not as beautiful building, or, as my friend Professor Lethaby says, “building touched with emotion,” but merely forms and details, foreign to the purpose of the building they are supposed to adorn and quite foreign to the characteristic and needs of those dwelling or working within?

The other day, landing at Cherbourg, our train ran past any number of the most charming buildings; some big, some little, all utterly devoid of Architecture with a capital “A.” They were beautifully constructed of the stone of the neighbourhood, with beautifully tiled roofs and beautifully shaped windows where such were needed, and that was all. Of course, the same thing is true of large sections of England, but it is *not* true of the things we architects are doing to-day in France, or England, or America, and this is largely due, I think, to our clients and their taste—their invariable good taste. I call you to witness that taste, good or bad, was a thing unknown until the Renaissance. But if you look carefully—(they are rather ineffective in an exhibition)—you will find some buildings of this right sort here, I trust. Take the Rogers' House at Southampton, Long Island, by Walker and Gillette—a trifle more southern in character perhaps than its situation warrants, but surely most desirable to look at or to live in. There are lots of others, too, unfortunately not here. For instance, my friend Barber has a lovely little village community house up in Westminster county that I should have liked you to see—simple, homely and altogether charming, in which he forgot all about his Paris training.

There are not any very little houses in this exhibition, unfortunately, for all the world nowadays is working out its housing problem, and I am sure you would be interested in seeing what America has con-

tributed to the solution. Unfortunately for us, there is too much wood in our country. Where you and the French are using permanent masonry, we use clap-boards—siding, I think you call it—or shingles, and, in certain parts of the country, patented materials, which certainly may be more durable than these, but are rather dubious. I cannot name them for fear of libel suits, but everything that looks like heavy masonry, stuccoed or whitewashed, is not what it looks like by a long way. Even here, some pictures may deceive you. Our little houses are growing simpler and simpler; so, for that matter, are our big houses, but they are never quite so simple as on this side of the ocean. We have no peasantry in America. Everybody, no matter to what condition it has pleased God to call him, is everybody else's equal—and usually superior! The small cottager has to have a parlour as well as a dining-room, which is unfortunate for his pocket; but note this: he would rather have both of them in flimsy wood than a proper combination affair in more enduring material. Shingles, instead of slates or tiles, are the usual American roofing, and are due to the same causes; but we are slowly improving, or seem to be, and the little cottager has his bath that he does not any longer use to store fuel in. He used, in the tenements of the great cities at any rate, to cut out his plumbing to buy beer. Now, as you know, the Prohibitionists have changed all that, so he may as well let the pipes stay "put."

As for Gothic—I suppose I am expected to act as devil's advocate for this much-despised "style"—or let me call it rather principle of construction. While some of us are trying hard to succeed—(look at the work of my old partners, Cram and Ferguson, or that of Day and Klauder, for the most manful results)—we are really not "in it" with you. There are so many lovely Gothic churches in England that date not only from the fourteenth, fifteenth or sixteenth centuries, but from our own time, that on purely sordid and unworthy grounds I hope my possible clerical clients will never make pilgrimage to these modern churches of yours. Let me say that no modern, and but very few ancient, churches even approach the dignity and wonder and loveliness of the new Liverpool Cathedral. I have not seen it for a number of years, and cannot this time, for I am sailing on Wednesday from Southampton, but I am promising myself to bring my family over in the spring, and to land at Liverpool.

American architecture is better than it was. There

is no doubt that in practical matters we are vastly in advance of what used to be done when I first went to New York as a young draughtsman. The tendencies and purposes I have not dealt with, and cannot tell you much about. You can see them for yourselves. Some of us dream of a time to come when architecture, as we understand the word, will cease to exist, and when such ornament as is used will be as instinctive and inevitable as it used to be. This will mean, of course, a radical change in the world's civilisation, perhaps even in its government; but old as I am, I still cannot help believing that some day, somehow, the time will come when we shall have a style so ductile as to lend itself to all our extremes of climate and all our needs, from the tiniest cottage to the greatest public building.

Mr. DONN BARBER: Mr. Chairman, ladies and gentlemen,—Let me first of all tell you what a very great pleasure it is to be invited to come before you.

The very subtle little paper which Mr. Goodhue has written in his inimitable manner may furnish food for discussion—I hope it will—but he has done what is usual with him: he knows a lot, but never commits himself. And so, if I ramble along in my own way, making blunders, it is only the difference between him and me: the difference between the nervous though careful artist and what we call the Captain of Industry. Fortunately, in America we are not divided into camps as he says we are. If we do not love each other, we try to respect each other. And while, of course, in the profession of architecture we find the stumbling stones of jealousy and all the little things that come by way of interest and competition in the rush of progress, yet on the whole we get along pretty well. The fact that we are beginning to understand each other now, after twenty years of struggle with different ideas, and are coming closer together, augurs well for the future of our country in its architectural expression. I have been sitting here looking at these photographs and pictures and wondering if you who are here, and are thereby, I hope, evincing an interest in architecture, realise that we are a young country; whether you with your traditions realise that perhaps everything on these walls—which is only a small part of what we might show, because we are a voluminous people—dates probably no farther back than ten or, at the most, fifteen years. All the architecture in America—and what we call architecture is that which brings to our country the

interest of study in that craft—really has been produced over a period of two generations. Up to fifty years ago we had a great deal of building in our country, but there were no monuments worthy of the name of architecture, except certain isolated buildings such as the City Hall in New York, which was designed by a foreigner; while Grace Church, Trinity Church, and other buildings which we looked upon as being worthy of the name of architecture, were also mostly designed by foreigners. Of course, we have our Colonial work, which started in the South at Jamestown with the early Pilgrims. It consisted of a scheme of very simple buildings built of bricks, a lot of them having been brought from this country. In New England there is the Colony of Salem, where we have wooden architecture based on what was then the *Louis Seize* in wood; and there is the so-called Georgian architecture. Our cities were jumbles of cast-iron fronts, which were cheaper to cast than to make in stone, and, as used in New York and many of our other cities, very unlovely. The Century Exhibition in 1876 in Philadelphia, the first industrial exhibition we had in our country, was merely a collection of sheds made to cover the mechanical and other exhibits of the products of the material side of our country. In 1893, when the World's Fair came round, it was through the genius of men like McKim, Burnham and Hunt that we decided to do something to impress the people; something large and simple; so that for the first time we had what Mr. Goodhue would say was foolish: our *Beaux-Arts* plan, our *Cour d'Honneur*. Perhaps some of you remember many of those interesting buildings. At any rate, that exhibition was visited by Americans generally. As it was in the centre of the country, at Chicago, those who lived East and West, North and South all came; and the American, for the first time, carried back to his own home a feeling of something architectural. I think it was a very wise proceeding that these men should have produced a classic *ensemble*. We in our country at that time, you must remember, were not familiar, either through books or cheap prints, as we are to-day with architectural details and examples. Most of the people knew nothing about columns in architecture, or size, scale or schemes. Therefore they took back with them from the exhibition something of the dream city; some inspiration perhaps which became reflected in the awakening desires of the public. From that time things began to change. We

had a further exhibition in Buffalo some years later, also more or less classic, but a little more free in the scheme of design, into which colour was introduced, thereby making another object lesson. Then in California there was an exhibition at San Francisco, where the combination of the climate, the verdure of the city, and the wonderful situation on the water made it the great Exhibition of America.

Consider the changes that have taken place during the life of one man (I am thinking of the late Mr. George B. Post—whom I feel honoured to count one of my friends, and whom I looked up to tremendously as a younger man). He began the practice of architecture when there was nothing higher than a three-storey house, when plumbing was practically unheard of, and when there was no central heating, and he lived to see, and to build himself, some very high buildings. He saw in his lifetime of over a period of fifty years of practice this tremendous growth from nothing to what might be called everything in the way of architectural effort. Of course, when Mr. Hunt began to practise, having come back from the *École des Beaux-Arts* practically the first trained architect, he brought with him the traditions and the things that he loved most in the châteaux of the Loire and in French architecture, and he began doing real monuments in America. But Mr. Hunt's work, outside the enthusiasm he brought to it and the friends he made and students that he interested in it, did not stand for much in a constructive way; no more, perhaps, to use an extreme example, than Garnier, with his Opera House at Paris, or Michael Angelo with his personal work, or Raphael. Owing to the influence of Mr. Hunt, a great many younger men began to go to Paris to learn something of architecture. We had no Schools of Architecture in our country, but certain architectural courses in Universities which were very fragmentary, very elementary, and very stupid. When these pilgrims to the *École des Beaux-Arts* came back they arrived in great numbers. They began, of course, to do so-called French architecture; they were young and enthusiastic, and they imported into America illogical and stupid forms which they had come to love during their dreams abroad. And so we had a sort of influx of the French millinery art. For every building designed by an architect there were hundreds designed by contractors. French books came into the libraries, and forms were copied without any sense or knowledge of their reason, and we got a tremendous

taste—I may say a very bad taste—for very stupid work, and I think it was that to which Mr. Goodhue referred—and quite rightly. But these men came back with a certain knowledge of the theory and essentials of planning which I think has done more than anything else to solve the difficulties of the growing building industry of America. And, therefore, I am proud of being a Beaux-Arts man, just as I am of being a friend of Mr. Goodhue. I do not see why the one should preclude me from the other.

In our city architecture the streets are all built on the gridiron plan. Our forefathers had no imagination, and so we have avenues going North and South and little streets going East and West. The lots were divided into 25-foot lengths of frontage, and therefore our street architecture, particularly in regard to our business buildings, was really the architecture of the façade, the side walls and the backs being neglected. That of course spoilt the appearance of our buildings.

I understand that you are now beginning to think something of sky-scrapers in London. Sky-scrapers are high buildings which had an American reason in New York, and certainly a New York reason. The reason was this: that in the Southern part of the city, which was the business centre and the part in which was situated the Stock Exchange and banking locality, property was in very small freeholds, held at very high prices. Someone conceived the idea of building very high buildings on the very small lots, and with the advent of steel for supporting members of our buildings these sky-scrapers began to grow. Of course they grew so rapidly that, to use an architectural expression, these things seemed to lie behind. The sky-scraper began to be known as an American invention. It has no place anywhere else, and it really has no place to-day in America. Since that time, during the last twenty years, we have developed our transit facilities to such an extent that we no longer have to huddle together. However, these buildings were growing up like a field of asparagus plants, vying with each other, cutting out light and air, and making the lower storeys near the streets practically uninhabitable. So something had to be done.

I am now coming to a point at which I may be able to offer a suggestion that may be worth your thought. Something had to be done in New York, and so a Zoning Law was passed a year or two ago which was the result of very careful study. We had

to face the condition of existing things; we could not make such a law retroactive; we could not tear down the sky-scrapers already built. Some scheme had to be devised to let them remain, but at the same time control those that should come after. So a scheme was devised to preserve the light and air in the street, and the city was divided into zones. The height of the buildings already existing in the lower part of the city which was given over entirely to business buildings governed the zone in the district, which was known as the "two-and-a-half district." This meant that in that particular district you could build vertically on the street line of your building two and a half times the width of the street in which the building was to be erected. From that point you go a step back; one in three, or back within a plane which starts from the middle of that street, touches the limit of height to which you can go and then recedes. That pushes the higher portions of the building back on the lot, and if the lots are large the mass of the construction is in the middle. This has already begun to show that instead of damaging the plan of the building, instead of dwarfing the imaginations of the designers, it is bringing forward schemes of towers and turrets, and for the first time we are getting our towers and turrets treated on all four sides. The Woolworth Building, which, of course, is our great pride and which is perhaps the most extraordinary building in the world, is a different problem. The Woolworth Building is a block by itself; its turret tower is on the Broadway side, and being quite isolated, it can stand by itself. So can buildings such as the building of the Bankers' Trust, the Singer Building, and other buildings on smaller lots. Something had to be done, and what has been done has been a very good lesson. So that if you are thinking of sky-scrapers in London, before you build any why do not you take our Zoning Law and look it over, and then dilute it by at least 100 per cent.? Then arrange, as you can here, that you are going to start to keep your towers far apart, large at the base, and let them go up as high as they like. There is a certain advantage in a high building. The elevator made these high buildings possible, and without the present traction elevator, we could not have buildings such as the Singer Building, the Metropolitan or the Woolworth Buildings. The advantage of a sky-scraper is that your elevator shafts become very good corridors, and you can travel at the rate of 500 feet a minute instead of walking at

the rate of two miles an hour horizontally. So far as hotels are concerned, there is no question but that a reasonably high building is more economical. It enables service to be brought more direct and makes the whole thing a more practicable affair. But in our hotel districts, and in those zones in which private property is situated, we have what we call the one-and-a-half times district. As our streets are mostly 60 feet or 75 feet wide, that gives us practically a maximum of twelve storeys, or at most fourteen, in some of the wider streets ; which is not a high building with us, and is not a high building anywhere if properly planned and erected.

One other word I want to say about American architecture is that I think it is extraordinary for you to be interested in it. I feel that the men over there are working hard, and I think that perhaps the most interesting thing that has developed is what we have come to see as a consensus of opinion on the matter of scale. Scale, of course, is very important in architecture, and I was struck, here and in France, with the scale of things. By scale I mean the relation and size of the parts of the building to the people who use it. Those little houses at Cherbourg, to which Mr. Goodhue referred, at once impressed me with their charm ; they seemed cosy and caressing to the occupants who were in them. We had in America a period of doing things too big. Twenty years ago everyone was doing things in a large way and on a big scale ; trying to make their work impressive, to make the money of their client count as well as his position in the world. And then suddenly we all began to realise that there ought to be some connection between all these things ; some reason for them. And with all that came the study of steel for structures, and finally through the engineer and from economical reasons we have found that the best spacing for steel is somewhere between sixteen and twenty feet columns on the average, and that our storey heights should run somewhere between ten and twelve and not over fourteen feet. All our high buildings are divided into sections, and with a minimum sized window, say four feet by seven, coupled with bays, you get a sort of gridiron arrangement which immediately determines the scale of your openings and of your wall surface and of the applied columns that Mr. Goodhue says are useless. That has done more, I think, to invite the expression of our architecture than anything else. One of the most marvellous things is the foresight of Charles McKim,

who thought out in his very wonderful mind the fact that perhaps Italian Renaissance in architecture was more adaptable to use in our building areas than any other architecture. Therefore he brought frankly Italian monuments into our country ; he made no bones about it, or excuses ; he simply copied and adapted well-known types of buildings and placed them in the city which was fortunate enough to employ him as object lessons of monumentality. And so he changed the scale of things. When University Club was built on Fifth Avenue with the old three-storey houses and churches round it, it looked very large and simple and heavy. But since the University Club and the Forum Building near it and the apartment house have become absorbed in the surrounding architecture of modern New York, they take their place and hold their own, and so Mr. McKim was all we believed and what we now know him to be.

There is one more thing I should like to say, and that is that when all the stress and confusion of war has died away we are going to get one benefit to architecture, and that is from the pilgrimage of our American troops to this country and Europe. I find in my own office that the young men who came under me have an extraordinary love for architecture and art and the loveliness of Europe which they have got on their trip over here. You will remember we sent some two million men over, and they were taken from every class of life : some were Americans, some of foreign descent. They all came over and saw the destruction of things, which, apart from the horror of the destruction, seemed to them to be cruel in the sense of a destruction of beauty. They brought back with them inspiration for the fine things which we are beginning to see coming out in the sentiment of our country. As these young men grow up and have their own homes and use their own buildings, they are going to try and get something of that tradition and charm which you have over here, which we envy, and which we come over as often as we can to see. I thank you very much.

Discussion

The CHAIRMAN : We shall now be pleased to hear any points that may be raised during the discussion.

Mr. RAYMOND UNWIN : I should like to ask what is a traction elevator.

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Mr. DONN BARBER : With the old original elevators when you had a building a hundred feet high you had a minimum of 200 feet of cable, so that there was, in the first place, a useless and undue amount of power required to move the cables themselves. Suddenly somebody invented a traction elevator where, instead of putting the machine in the cell, they put it at the top of the shaft, so that there is only one cable that goes over the drum and balances the car. In the Woolworth Building the machine is at the top, and the machine is controlled from the car load.

Mr. C. E. SAYER : How about fire in these tall buildings ?

Mr. DONN BARBER : There is practically no possibility of fire anywhere as our buildings are now built. We have had tests in Baltimore where some of the new fire-proof buildings were erected. We took a common fire-proof building and subjected it to a test which is beyond anything that could happen again in a city like New York. Those buildings were simply set in a furnace of inflammable material, but they were not demolished ; none of them failed, though, of course, the window frames and such parts were destroyed. Most of them have been restored as far as their interior fittings go. To-day, of course, nearly all our floors are of concrete, whereas formerly they were of wood on sleepers, and of wood and trim. In New York any building over 150 feet has no wood of any kind in its structure unless fire-proof. It has to have metal trim and concrete floors, and things of that kind, so that there is practically no chance of fire.

Mr. HERBERT WELCH : There is a point Mr. Barber raised in regard to the question of zoning. Did I understand him to mean that buildings are still permitted in New York at the height of $1\frac{1}{2}$ or $2\frac{1}{2}$ times—whichever district they happen to be in—the height of the street to the vertical wall-face on the frontage line, and from that level upwards they have to be set back in different lines ?

Mr. DONN BARBER : The usual way in which it works out is that the least angle is one to five ; one foot to every five feet you go up, but that the average is one to three ; one foot for every three you go up. You can set back two feet and go up six, or go up in any arrangement within that plane. I did not go into the details of the Zoning Law—time would not permit ; we should be here until midnight—but on 60 per cent. of a hundred foot front you can go up within that angle as a dormer, or take the

equivalent of that dormer in area and make it two or three, or so on.

Mr. DAVIS : Have you any law dealing with ancient lights ?

Mr. BARBER : None whatever.

Mr. A. J. DAVIS : I had the pleasure during a voyage back from America some time ago of having a conversation with Mr. Hastings, and he told me the sky-scraper in New York was not a paying concern ; that large buildings such as the Woolworth and the Singer Buildings were failures from a financial point of view ; they were merely put up as advertisements. He said when they were full they did not pay more than $1\frac{1}{2}$ per cent. on the cost, and when not entirely full they were a financial failure.

Mr. BARBER : That is true, but not if you take a building such as the Drexel Building, which was, of course, the largest building in the world. That pays well as compared with the Woolworth Building, which was more or less put up for advertisement. I think it pays $1\frac{1}{2}$ or 2 per cent. In the office buildings of America they do not look for large profits. All our large pieces of property are largely owned by estates, and they only look for a reasonable income. They are not built to enable them to get rich quickly. In fact, they do not.

Mr. H. M. FLETCHER : About the carrying out of these buildings ; the execution of them in many cases is extraordinarily brilliant in masonry, carving and other trades. It would be interesting to know whether America is forming a tradition of these building crafts, or are they mostly done by newcomers ?

Mr. BARBER : That is a very interesting point, and one on which I would like to talk for some time. I do not quite know how to answer it in a few words, except to say that in our country speed in construction is one of the great factors. Take such a building as the Commodore Hotel, which cost somewhere between fifteen and eighteen million of dollars. You can readily see that six months or a year's additional time spent on construction, carrying charges and all the various operations, becomes a very serious financial question. So that the question of speed in construction has to be counted very carefully.

On the motion of the Chairman a hearty vote of thanks was accorded to Mr. Goodhue and Mr. Barber for their addresses.



FIG. 3.—CITY OF WASHINGTON. A PART OF THE MONUMENT GARDENS

American Architecture and Town Planning

By RAYMOND UNWIN [F.]

[A Paper read at a Public Meeting on Tuesday, 29 November 1921, in connection with the American Exhibition, SIR ASTON WEBB, P.R.A., in the Chair.]

THIS Institute has long recognised the close connection—I might say interdependence—of Architecture and "City Planning," to use the term adopted for what we call "Town Planning" by our American friends, who are more generous than we are in the use of the honourable term "city." In 1908, when the International Congress of Architects met under this roof, the subject was prominent in the discussions, and papers were read by distinguished visitors from several countries. In 1910 this Institute called together one of the most influential International Conferences on the subject which has been held. The published proceedings of that meeting are still valued as one of the most comprehensive volumes dealing with the subject. The Exhibition in connection with the Conference of 1910 contained many inspiring examples of American work, particularly Burnham's great scheme for Chicago, and many drawings of park and playground treatment by Olmstead and others. To-day it would be easy to fill the whole of the galleries then occupied by our Exhibition with recent American town planning proposals, each of which would be worthy of our study. In this country a few enlightened owners of large estates had in the past afforded us admirable examples of extensive site planning. But our local authorities had

limited powers conferred upon them for the first time in 1909, and progress has been delayed by the various more urgent preoccupations which have absorbed our energies.

If in this country the work was taken in hand later than in some others, we have at least the advantage of seeing what others have done; not that we may copy their work—because, if successful, it will be more adapted to their conditions and temperament than to our own—but that we may profit by their experience. For example, we would not presume to say whether the conditions, and the power of endurance of the citizens, render the New York elevated railway necessary and tolerable; but God forbid that we should copy it, or should forget to be grateful to those who have tested it for us! Is not this an instance of the great advantage which the civilised world derives from the differences which exist between the nations? We are at times thoughtlessly inclined to criticise other peoples because they are not more like ourselves. A great disaster, surely, it would be if the wish that prompts such criticism should be granted! The particular contribution to the world's knowledge and capacity which we of the British Isles are able to make—and I am not disposed to rate it as a small one—has been and is being made. That other

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countries should contribute merely the same would add nothing to the total stock of experience that we all share ; but that they should each contribute something different, reaching a higher level in some directions where we fall short (as in the Elevated *l*), though, having to be content to reach a lower level in some of those directions in which we excel—modesty declines examples—is surely to the great gain of all. In city planning clearly we have much to learn from many countries, from France, from Germany, from Sweden, and from America, mentioned last only because it is to the American contribution that special reference will be made.

I could have wished that more examples of city planning had been included in this Exhibition ; but of city adornment a rich display is offered us. The addresses given by Mr. Goodhue and Mr. Barber last week made us realise that much of their friendly though serious humour, anent styles, tradition, and originality, had considerable application to town design. We meet in that field of work also the constraining, and guiding, influence of tradition, sometimes tending to become stereotyped as prejudice ; we meet also the pushful impulse of originality seeking to break away from restraints to satisfy modern needs in new forms, and in the exaltation of enthusiasm at times finding expression in a language which we older people have not yet learned. We wish God-speed to this youthful energy ! With it lies the future ; but perhaps the buildings here illustrated may help us all to realise how tradition may be firmly, though kindly, dealt with ; how new needs may be met by originality of conception, without breaking into a form of utterance too strange to be understood of the people (see Fig. 1).

The past experience of America in city building has been very different from our own. The cities, or even parts of cities, that have been built to any formal plan in our country are few. Our towns have mostly come into being gradually, around some point of attraction, a natural harbour, river ford, or the crossing point of important highways ; or they have sprung up under the protection of a castle-crowned rock, or around some sacred fane. They have grown by gradual accretions, regulated, indeed, to some extent, where the ownerships of land have been large, but with little co-ordination of the whole into anything which could be called a consistent town plan.

In America, on the contrary, nearly all towns are new towns laid out to some plan—generally, perhaps following the lead of the square survey lines, to that most elementary kind of plan known as the gridiron or checkerboard design. There have, however, been exceptions. Philadelphia owes to William Penn a plan of greater interest. Though based on the gridiron system, it nevertheless had a main central square and four subsidiary squares, which could readily form secondary

centres ; and it was provided with four main roads of outstanding width leading in the cardinal directions. Moreover, there was considerable variation in the size and proportion of the building blocks, some being approximately square and others long and narrow. The plan had, indeed, many merits for the limited city which William Penn had reason to foresee.

L'Enfant's plan of Washington, on the other hand, affords an example of French methods, admirably adapted to the nature and undulations of the site, having very definite main and subsidiary centres of interest, and an ample provision for diagonal intercommunication. The whole is treated with great skill, and no small share of architectural imagination. For many years the inhabitants had to struggle along with a plan several sizes too large for their wants ; but they persevered, and now have their reward. Some charming drawings of this plan, showing how it is now developing, will be found in this Exhibition. They do not, however, sufficiently indicate the undulations of the site to do justice to the placing of the Capitol with its great dome on the edge of the hill overlooking the wide mall, fully seen to the best advantage from the whole length of that mall, or to the arrangement of the buildings on the opposite side of the Capitol occupying the remainder of the tableland, so that the distant view of the building from those points where it might have been partly obscured by the edge of the tableland is masked, and the dome alone figures as the terminal feature in the streets approaching from that side. This placing of the Capitol is a notable contrast, and I think we must admit an improvement, upon that of the Palace at Versailles, the view of which, when standing on that magnificent approach from the water, is obscured by the edge of the high garden which cuts off the bottom storey of the building. The wonderful column of white marble rising 500 feet into the sky in memory of the great Washington, changing in colour with the moods of the weather from deep blue grey to rosy red, provides a fitting terminal facing the Capitol at the opposite end of the mall, and completes this conspicuous example of the co-ordination of a plan with its site, and their combination into one harmonious design, which perhaps marks the supreme achievement in city planning (see Figs. 2 and 3).

Mr. Goodhue has provided us with a very different example of the same kind, in the wonderful way in which he has blended his beautiful buildings with a superb site at Westpoint.

We were all greatly struck when listening to our two distinguished visitors to realise within what a remarkably short period Americans have become masters and leaders in the art and craft of building ; and in the main they have done this in spite of very great disadvantages arising from their system of town planning. When in 1807 the Commission sat to prepare the plan for New York, instead of developing the greater ideas of William

Penn's plan, or following the lead of Washington, they fell back on the simple gridiron arrangement, reserving, it is true, one or two adequate squares, but covering the island of Manhattan with a system of regular streets, with the full intention, which perhaps fortunately the persistence of custom frustrated, of obliterating the old track which has now grown into the renowned Broadway. The Commission frankly based the whole plan, not on broad considerations, but on the shape of the smallest detail. The rectangular system was adopted, they say in their report, on the ground that a city is "composed principally of the habitations of men, and that straight-sided and right-angled houses are the most cheap to build and the most convenient to live in."

Apart from the irregular and diagonal Broadway, the main streets of New York, varying in length from 5 to 10 miles, continue uninterruptedly in dead straight lines broken at regular intervals of about 66 yards by the multitudinous series of cross streets, and let me say at once that it is neither the regularity nor the uniformity which strikes one unpleasantly in the American towns; sometimes I felt that these were, indeed, the two features which redeemed the arrangement; but what does strike one is the absence of any relation between one part of the town and another, there is no proportion between important roads or parts and subordinate ones, there is no reason why one road should be followed rather than another, the distances from point to point usually being exactly the same, whichever of two or three dozen streets one may choose to follow. In spite of this drawback, in spite of the fact that there are hardly any sites on which buildings can be properly seen in the ordinary streets, and that the whole town vistas consist in indefinitely long vanishing perspectives, in spite of the fact that building blocks are so limited that often neither a very big building like the Pennsylvania Railway Station, nor a children's playground like many in Chicago, can be provided without blocking up a number of streets which are continuing for miles in both directions: in spite of this lack of inspiration from their city sites, confined as they have been mainly to designing façades for buildings standing on the street line, our American colleagues have something good to show us in Architecture (see Fig. 4).

Originally, no doubt, emphasis for important buildings was secured by soaring up above their neighbours, but that means of attaining eminence disappeared when the neighbours also grew approximately to the same height; and emphasis was, I believe, attained by those who could afford it through the lowliness of their buildings; but emphasis can now be secured by eminence of design.

After the development of the great Chicago Exhibition, followed by others, some of which are beautifully illustrated here (see Fig. 5), in which a masterly planning and disposition of buildings on free ground unhampered by the gridiron plan was adopted, there passed over Ameri-

can cities a wave of enthusiasm for the creation of suitable civic centres; for the clearing of sufficient space for the reasonable disposition of their main civic buildings, and for the creation of some places or groups of places which might give appropriate emphasis to the heart of the town. Some very fine schemes illustrated with beautiful drawings were prepared, and, in less number, the schemes are being carried out. But that phase passed, and American city planners found that they were up against many other big problems which called more urgently for solution. During the last ten or fifteen years a great volume of investigation work has been carried out in connection with municipal organisation, the provision of transport, and the zoning needs of cities; also in connection with the solution of the housing problem, which has been more and more forced upon the attention of American city planners. I noted as a matter of the greatest significance and interest the closing remarks of Mr. Goodhue in which he endorsed the view that the first duty of the great city is to see that all its citizens are at least accommodated with decent homes to dwell in. We shall, therefore, not after all criticise the Commission who planned Manhattan Island, because of the great importance which they attached to "the habitations of men," though we may question the particular inferences as to the arrangement of roads which they drew from the convenience of a square house. Those who are familiar with the work which has been done in recent years by architects and landscape architects, by John Nolen, Arthur Comey, and many others, will endorse most fully our testimony to its value, to the contributions which they have made to practical efficiency, and to the boldness and imaginative skill with which great problems are being handled.

The setting of his buildings must always be an important consideration for the architect, appealing even to those who concentrate their attention mainly on the individual building with which they are dealing. Unfortunate as it is, this limitation of regard has almost been forced upon architects owing to their complete inability to control, or even to foresee, the probable character which any of the surrounding edifices would assume. At the mere mention of town planning, hope of escape from this limitation revives, the angle of our vision expands, and regard is extended to the surrounding buildings, the place, the street, or the group of streets. It is not surprising, therefore, that architects should have taken a large share in the revival of interest in town planning: so much so that they occasionally incur criticism because enough weight has not been given to some of the non-architectural aspects of this wide subject. It is perhaps open to them to reply that the criticism has arisen because other sections of the community, more particularly concerned with industrial development, transport facilities, the protection of property by suitable zoning regulations, and



FIG. 2.—PLANS OF THE CITY OF WASHINGTON



FIG. 5.—PAN-AMERICAN EXPOSITION, BUFFALO, N.Y.
Carrere and Hastings, New Jersey



FIG. 1.—MEMORIAL TOWER, WELLESLEY COLLEGE,
MASS. Day and Klauder, Philadelphia



FIG. 4.—UNIVERSITY CLUB, CHICAGO
Holabird and Roche, Chicago

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many such matters, have not shown equal interest, and that the balance should be restored by greater interest in town planning and its possibilities on the part of other sections of the community. There is still much for the architect to study; many problems in civic design remain for him to solve; without adding to the already wide range of subjects he must know, two or three more, which might well be dealt with by men of other professions. Others may have taken too little interest in the subject; we cannot admit that architects have devoted too much consideration to it, and no apology is needed for any reference to the architectural aspects of the matter this evening. For it is one which still calls for our earnest thought; and neither the necessity for giving prior emphasis to other requirements nor the temporary depletion of the funds usually available for civic adornment can justify the neglect of so essential an aspect in all good town planning work.

We should, however, neglect both order and proportion if we did not recognise the great social and economic problems connected with the development of towns which to-day demand prior attention. And we should be misleading the public if, by over-insistence at the moment on the virtues of civic art, we should unwittingly convey the impression that town planning is a new luxury, and a costly luxury at that. The fact is that the adoption of town planning is being forced upon this and other nations because they can no longer endure the prodigious expense of doing without it! A piece of simple domestic economy it is, applied to the civic housekeeping, for the purpose of conserving the resources, avoiding waste, and securing the greatest comfort and well-being for the civic household. It is impossible to estimate the loss which we sustain for want of the application of foresight and common sense in town development, but the sum of it is very great, enough to carry out the wildest dreams of civic adornment. Many millions are spent in street widenings for want of a proper street plan and an adequate distance having been left between buildings. Some important streets have been widened, buildings pulled down, compensation paid and new buildings erected two or three times within our memories. Whole areas are constantly being ruined by the encroachment of buildings of incongruous character. In fact, the expansion of commercial, trading, or industrial areas regularly takes place at the expense of property often valuable and in good repair, and usually each expansion is preceded by a wave of deterioration lasting often for years and involving severe depreciation of value, loss, or even ruin, to many property owners, and the ultimate waste of numerous buildings which might have served their original purpose satisfactorily for many long years. In many towns, areas which are essential for the proper expansion of the local industries are covered with cottages, good houses are being erected on streets over

which commercial buildings will inevitably spread at an early date; factories, in their turn, occupy land which should be reserved for dwellings, or stand in the way of the development of adjacent business premises. In Chicago many millions of money have had to be spent to pull down buildings and clear areas that the children may have playgrounds, areas which might have been freely reserved by the exercise of a little forethought; and great is the credit which must be given to modern Chicago that, in spite of this want of forethought on the part of their predecessors and the immense cost of the work, the extent and the character of its provision for the recreation of its children is second to that of no other city, so far as I know.

So far from city planning being a luxury, therefore, it would be truer to say that going without it is one of the most expensive luxuries in which we at present indulge. A town planning scheme itself does not necessarily or usually involve the community in any expense; it is not a great project for carrying out costly works, but is rather a prudent plan according to which, if and when development takes place, it shall be carried out. The recognition of this fact does not, however, bring us directly to our problem of making the city plan. Modern large towns appear to have outgrown their organisation, and we citizens have to make up our minds whether we can wisely or even safely allow them to continue indefinitely to expand without some fundamental change, without introducing a new general form, a fresh arrangement of the parts. Green girdles, detached suburbs, satellite cities, or the founding of colony towns to provide for expanding industry and population are being considered as possible alternatives. During the last few years, owing to the great world convulsion, many instances have occurred where the city organisation has broken down, and the people in the centre have been without fuel and without food. Even at the present time, in Vienna, which has a population of about two million inhabitants, owing to the collapse of their currency and the general disorganisation, I am told that fuel is scarce, that eggs are seldom seen, that milk and butter are absent from the tables of all but a few of the temporary rich speculators and some of the hotels. Nevertheless, in the villages around, all these things may be found. Many thousands of the citizens are so convinced of the danger that, in spite of poverty and collapsed currency, they are struggling to build dwellings on the open land outside the city at 150 times their pre-war cost. The safety and well-being of the population, therefore, in addition to the need for economy, demand that we overhaul the organisation as well as the planning of our great cities.

It is necessary particularly to study how best to provide in them for the centralisation of commerce and the daily journeyings of those engaged in all its branches.

Mr. Barber, in his most valuable address last week, brought vividly before us some of the disadvantages of seeking escape in the vertical direction. He explained how New York had been driven to fixing limits of height according to zones, and hinted at the very serious congestion of traffic which results from piling immense numbers of commercial rooms upon a small space of ground. It is to be hoped that we in this country will take to heart his warnings, and, in view of the uninterrupted open space around most of our towns, will not be too ready to copy an expedient which was forced upon New York owing to its situation on the long narrow Manhattan Island, surrounded by water too wide to be readily passed over by a bridge, or under by a tunnel. I agree with Mr. Barber that there is a place and a function for the high building, but I believe it to be a limited one, and that proper planning and disposition of the areas of great cities would tend to reduce both the number of occasions on which the high building provides the best arrangement for concentration, and the height to which in those limited cases it is desirable to soar (see Fig. 6).

The economic life of most of our great cities is based on manufacture, and the specialisation of modern times leads to the very great interdependence of industries. Hence efficiency often requires the local concentration of many industries upon a suitable area, where the raw materials and the finished products can be brought in and despatched with the minimum amount of handling and expense and where power and other facilities can be provided. These areas need to be selected and preserved, and to enable this to be done properly, the conditions regulating their position, their size and their distribution in relation to the city need to be determined. The great markets are also important to the distribution of the citizens' food. The cost of London's supply of fruit, vegetables and fish is increased, and the quality or freshness is deteriorated, because the great markets which handle these necessities of life cannot be provided with proper transport facilities, are so placed, in fact, as to involve the maximum amount of cartage through congested streets and handling, with consequent delay in distribution.

We have further to consider the question of the distribution of population. Few people realise the extent to which London's population has transplanted itself during the last twenty or thirty years and the speed with which that movement is still going on. We have to decide how best to guide this distribution of residential areas so as to provide the easiest access to the commercial centre and the industrial areas for those who work there; and further how to combine with this distribution the greatest possible localisation of the lives, the activities, and the enjoyments of these redistributed populations, a matter which is of the greatest importance in the interests of economy of transport,

the reduction of congestion in the central areas, and also in the interests of that greater development of local community life on which the maintenance of an adequate standard of character in modern city populations largely depends.

When the citizens have somewhat more clearly decided what kind of town would represent the city of their hopes, what type of orderly form they would wish to see replace the present disorderly accumulation of industrial, commercial, trading and domestic buildings which constitute the modern great town, there will still remain to be devised the most convenient methods for regulating future development, for preserving the character of the newly planned areas, and for gradually enabling the confusion which at present exists in the older areas to be disentangled. The framing of suitable ordinances to give effect to the zoning intentions, to control the character and uses of buildings and their heights, so as to give the maximum of protection with the least interference with the legitimate freedom of their owners, will be a matter of considerable difficulty in which we shall be wise to make the utmost use of the experience already gained in other countries, notably in Germany, and more recently in America.

With a view, no doubt, to stimulating progress in town planning, and perhaps wishing to encourage municipalities to adopt the method of learning described by the Latin phrase *solvitur ambulando*, a method somewhat similar to that of teaching boys to swim by throwing them into deep water, Parliament has decreed that within three years from the commencement of 1923 every municipality in this country containing more than 20,000 inhabitants must prepare a town planning scheme, having first submitted a preliminary statement of their proposals for the whole of their area likely to be further developed. There is some urgency, therefore, in regard to the questions with which we are dealing. At the Ministry of Health the problems involved have for some time been the subject of investigation; and the legal, administrative, as well as the technical aspects have received careful consideration in the light of experience already gained. Suitable and reliable means are being prepared for securing an orderly development of new streets and open spaces, and fairly distributing the cost; for regulating the density, character and height of buildings, and for creating and preserving zones of utilisation. There will be available shortly model clauses for giving effect to the chief purposes of town planning, the use of which should considerably facilitate the work of preparing the codes of regulations which necessarily go with the development and lay-out of plans to form the complete scheme, for there is no use drawing up diagrams on paper unless there is a complete scheme to give effect to them.

These are problems in which the architect may take

The data deduced by Mr. Lund are in some cases taken from buildings which bear no resemblance to their original form, and it seems inconsistent to use such buildings for his purpose. He tells us we have only two Gothic buildings in England, Westminster Abbey and Beverley Minster (in passing we may well ask what is a Gothic building), but he illustrates several English churches, using Bond's and other well-known books for his source of supply. He has also made use of two rough lecture diagrams drawn by the reviewer, and has covered them with circles and lozenges in order to sustain his theories.

The reader learns that Lincoln Cathedral is planned "ad quadratum" because certain diagonal lines coincide with the length of Remigius' nave, the angles of the thirteenth-century extension of the west front, the length of the transept, a point somewhere outside St. Hugh's apse, and another point approximately in line with the fourteenth-century east window!

The interior of the nave at Lincoln is described as an architectural deformity on account of the wide spacing of the eastern columns, which constitutes a breach of "ad quadratum" rules. We may be content to admit that the designer of this nave knew more about church building than about geometry. Working within the limits imposed by the height of the existing quire and transept, he gave his arches an exceptional "stride," and by this means secured an effect of spaciousness and lightness which gives his work a very distinctive character. Salisbury, we are told, is designed strictly "ad quadratum," and this may perhaps account for its exceptional dullness. Westminster Abbey is also "ad quadratum," but we are told that it ought to have had five aisles instead of three.

Of Wells Cathedral there is given a plan covered with diagonals which start from Jocelyn's west front, intersect some thirty feet outside each of Bishop Reginald's transepts, and meet again at various points which coincide neither with the original thirteenth-century east end nor with the east wall of the fourteenth-century presbytery, nor with that of the Lady Chapel. There is also a section showing how the proportions of the fourteenth-century lantern were foreseen by Bishop Reginald in the early thirteenth century, and a photograph of the west front shows similar foresight on the part of Bishop Jocelyn, who apparently knew what his successors would do 200 years after his death. York Minster is also tested by the author's methods, and it is pleasing to observe the accuracy with which the thirteenth-century transepts fit into the plan of the fourteenth-century nave and the fifteenth-century quire.

Of large Continental churches the author selects Notre Dame at Paris and Cologne Cathedral as his chief examples. The first of these churches conforms to his rules. Its west front, with its bold square outlines, has been generally admired as a masterpiece of design, but

the artistic effect of the rest of the church hardly seems to justify the use of the square as the basis of proportion. At Cologne the architect is said to have made a geometric error in setting out his west front, and Mr. Lund gives a corrected design which is certainly more shapely than the very ugly one which has been carried out from the original fourteenth-century drawing.

The man in the street is apt to become bewildered by all he has been told about the architects of the good old times. One professor proves that they were all profound mathematicians and students of Pythagorean philosophy, another that they built all their churches crooked either to correct or to enhance the effects of perspective, a third, like Mrs. Prig, "don't believe there were no such persons."

There does not, however, seem to be much question that the book under review would have been better if the somewhat ill-natured criticisms of Mr. Nordhagen's work had been omitted; in the judgment of the reviewer, the authorities of Thronhjelm Cathedral, having decided to carry on its restoration, and having selected their architect to the best of their ability, would be well advised to trust the man at the wheel to work out his own salvation, and to get on with the building instead of talking about it, since it is only through practical work that practical knowledge can be attained.

CHARLES A. NICHOLSON [F.].

THE RENAISSANCE OF ROMAN ARCHITECTURE. By Sir Thomas Graham Jackson, Bart., R.A. Part I—Italy. 1921. 42s. net. [Cambridge University Press.]

Sir Thomas Jackson has added an important volume to his series of books dealing with the development of architecture in Europe,* and it is particularly fitting that one so deeply learned, so widely travelled, and with the experience of so long and active a life, should make this valuable contribution to the architectural literature of the day.

Our knowledge of the Renaissance period, rightly considered one of the most fascinating periods in the history of the mind, must always owe much to Mr. Anderson's book; but of recent years Mr. Geoffrey Scott's† analysis has stimulated a fresh and deeper interest in the subject, and it is therefore opportune that this latest full and detailed account should come to throw still further light on a subject that must always make a deep appeal to architects.

The effort to teach too much in too short a time is one of the fairest criticisms of the present training of architects. This book is an admirable antidote to "potted know-

* *Byzantine and Romanesque Architecture*, in 2 vols.; *Gothic Architecture in France, England, and Italy*, in 2 vols.

† *The Architecture of Humanism*. By Geoffrey Scott. London, 1914. Constable.

Reviews

AD QUADRATUM. *A Study of the Geometrical Bases of Classic and Mediæval Religious Architecture, with special reference to their application in the Restoration of the Cathedral of Nidaros (Thronhjelm), Norway.* By Fredrik Macody Lund. [London: B.T. Batsford.]

This imposing book, published with an accompanying album of plates by order of the Norwegian Government, treats of the reconstruction of Thronhjelm Cathedral, a work entrusted in 1869 to Christian Christie, and carried on by him till his death in 1906, when Olaf Nordhagen was appointed his successor.

The cathedral in 1869 was in a ruinous state, the octagonal building at the east end, the so-called chapter house east of the north transept, the lower part of the central tower, the outer walls of the nave and quire aisles, the walls of the Romanesque transepts, and the base of the western screen front being all that remained of the mediæval work. With the exception of the transepts, the whole church had been rebuilt in fourteenth-century style, and its architectural detail somewhat resembled that of the Angel quire at Lincoln Cathedral. The west front appears to have been a screen of niches not unlike the fronts of Lincoln and Wells, and there were two western towers outside the line of the aisle walls, like Wells and Rouen. The arcades, clerestories, and vaulting had all disappeared. Christian Christie appears to have restored the octagonal eastern chapel, the so-called chapter house, the quire, and the transepts, taking the work of Lincoln as his guide. The nave restoration is not yet completed, and is in the hands of Olaf Nordhagen.

The author of *Ad Quadratum* criticises the work of Nordhagen with some severity, and claims to have discovered the geometric system on which the design of the fourteenth-century portions of the cathedral was based. Whether or not he makes out his case will be best judged by those who have read the book.

Illustrations are given of Olaf Nordhagen's design for the reconstruction, and this shows considerable dignity and restraint, whether it is archaeologically correct or not. It may be questioned whether strict archaeological accuracy is in itself desirable in the case of a restoration of this character. If successful, it will falsify the history of the building; if unsuccessful, it will falsify its artistic character.

Cockerell, Gwilt, Viollet le Duc, and others have worked out Rosicrucian theories of proportions, and Macody Lund's essay in this direction is no novelty. He pins his faith to the angle given by the diagonal of a double square ($63^{\circ} 26'$), whereas most of his predecessors have sought perfection in the angle of an equilateral triangle (60°).

His work is, however, full of inaccuracies. Many of

the plans given are rough diagrams incorrect in their details and dimensions. The geometrical figures with which they are covered seem in some cases "cooked" to fit his theories, and, in spite of this, no intelligible conclusion is arrived at except the obvious fact that some buildings can be resolved into collections of cubes, and the other fact that the author wants to get Olaf Nordhagen turned out of his position as architect in charge of Thronhjelm Cathedral. Furthermore, on the archaeological side, the author claims that Archbishop Eystein, who died in about the year 1190, designed the full-blown and bulbous Gothic nave with its traceried flying buttresses which we find reconstructed on paper in the ponderous book under review. Fergusson, with more show of reason, says that Eystein built the Romanesque transept, and the analogy of Kirkwall, where the Norse builders went on building with Norman detail right into the fifteenth century, leads one to the conclusion that Fergusson was in all probability right in his chronology upon this occasion.

However, Macody Lund's readers may be left to decide how far he proves his theory by covering the plans and elevations of well-known churches with elaborate geometrical arrangements of circles, pentagons, rectangles, and diagonals, and may derive entertainment from pictures which show what York Minster would look like if it were built of expanded metal sheeting.

Sometimes the measurements of the buildings illustrated coincide with the intersections of the geometric diagrams; sometimes they don't. In the latter case it is, of course, quite easy to write the building down as the work of an ignoramus. But it is not easy to trace a very consistent system of coincidence even in those buildings which most nearly conform to the author's theories; sometimes he is constrained to use as his unit of measurement the over-all dimension, sometimes the clear span, sometimes the centre-to-centre measurement. Then he seems quite satisfied if his geometrical lines intersect at the top or at the bottom of a window or a gable. Within such elastic conditions it is not impossible to obtain evidence of any desired system of proportion based either upon mystic numbers or upon mystic angles.

When, however, the author claims that the system he has discovered gives "full guidance for the stability of the overwhelming and daring cathedral architecture of the middle ages," one can only envy him his assurance and ask how it is that the history of nearly every large mediæval cathedral is a long story of patching and propping, enlarging and altering.

These criticisms are made by one who believes that the old builders did use numerical and geometrical methods of obtaining agreeable and consistent proportions to a very considerable extent, though not as an infallible method of solving every architectural problem they had to tackle.

cate those public bodies—not, of course, Mr. Unwin's—as to the value and the desirability of schemes for all enlargements of our towns and cities.

The collection of American work is, of course, interesting to all of us—the problems are so vast, one may almost say so stupendous, and they are carried out with great determination and skill. Those of you who have been to America will know how interesting it is to be there and to talk with the gentlemen who are carrying out this work. Another thing is they carry them out so quickly that if, when you arrive, a building is just getting out of the ground, you will find after a reasonable stay the building half-way up. There is little waiting for the result. Building is carried out in extraordinarily quick time, because, I think, all the material is prepared first; the ironwork and the stonework are all ready, so that when they begin on the site the building goes up like lightning. All that interests us very much indeed. But it does not at all follow, because it interests us very much in New York, that we wish to see the same thing done in England—in London, where we have small, narrow streets and a heavy climate such as we have been experiencing during the last three days, high buildings of this sort, in my judgment, are altogether undesirable. I have spoken with American architects—some of my greatest friends are American architects, I am glad to say—and I have said to them, "Why do you do it?" And the reply has been "Because we cannot help it; we are obliged to." They never say "Because it is a splendid thing to do," although these high buildings in New York are splendid things. New York is practically a little island, and all the business has to be carried on in a very small circumference, and everybody wants to live there or to do their business there, and therefore they are obliged to go upwards, because they cannot go sideways. Fortunately, we can spread out, and there is no necessity, so far as I can form an opinion, for us to spoil our towns and cities. These American gentlemen who have been over here consider London a charming and delightful place. So it is. Don't spoil it! Even if the most attractive commission comes to you, don't let them spoil London. It is our greatest possession. It is a sweet and delightful place, full of amenities which it is possible to destroy if you once begin to erect buildings on the American scale. Sometimes a big building is put in front of a large open space, and may not look out of place. Morley's Hotel, in Trafalgar Square, will have to be rebuilt before long, I think. "That is a good open space," you may say; "go as high as you like." But what is then to become of the other buildings—the little National Gallery, which is top-lighted? And as for the Nelson Column, that would be only a sort of lamp-post! This is a most serious thing; and I hope you will have the pride of citizenship and the love of citizenship, and refuse to spoil London by putting up these high buildings. I do not

think they are at all necessary. I used the phrase "pride of citizenship," and I was delighted to hear what Mr. Unwin said about that. I think we all ought to have it; I do not think we have it enough. I would like to find it taught in public and elementary schools, perhaps more than all in public schools—the importance of every man who lives in a town or a village seeing that the amenities of the place in which he lives are not destroyed and ruined—I am not now speaking of high buildings—in any way. And especially we artists, artists of all ranks—painters, sculptors, and so on—whatever we are, we ought to see that the towns in which we live are not spoiled by (very often unknowing) vandalism. Municipal corporations (I happen to be a member of one of them) would do all sorts of things if not restrained—not willingly or knowingly, but because they have not the wisdom, generally, to ask for advice where it can be obtained.

Mr. Unwin mentioned Washington. I had the delight of going over Washington with Mr. McKim, who, with Mr. Burnham, designed the alterations; and there, of course, they are laying down laws which will prevent Washington being spoiled. It is wonderful the beauty which is gradually coming to Washington, for which L'Enfant's plans were some of the finest made. Mr. Unwin also mentioned the length of the streets in New York, and that is a difficulty. I think Mr. Unwin said the shortest main street there is five miles long. I did not think it was so long. I hope we shall never come to anything of that sort.

I did not mean to say anything this evening, but Mr. Unwin roused me when he spoke of high buildings, and I was so delighted to find he was of the same opinion as myself.

I would like to bear witness to our great thanks to the Americans for sending over this most interesting exhibition for us to see. It is an educational influence for us; and, if they ask us, I hope some day we shall send them an exhibition, because we are doing some good things. Our buildings are not great in height; but they are very long, some of them.

I ask you to pass a most hearty vote of thanks to Mr. Unwin for his most enlightening and interesting Paper.

Carried by acclamation.

Mr. DAVIDGE: Before we separate, I am sure you would wish that we should express our thanks to Sir Aston Webb, the President of the Royal Academy, for presiding this evening. He is one of the architects who, for many years, has taken the keenest interest in town planning and civic design; it is essential to combine the two. I am sure you will wish to unite with me in expressing thanks to Sir Aston for showing in his little speech how it is possible to combine these things for the production of the city beautiful, whether it be a large city or a small village.

The vote was accorded by acclamation.

the greatest interest, but we do not pretend that they are architectural problems, and we recognise that their solution must take precedence of that particular aspect of town planning with which we are primarily concerned. When once these general questions of distribution have been determined in connection with any new city, or the development of an existing town, when the civic and commercial centres, the factory areas, and the residential districts have been allocated, when the main means of transport have been settled, and the directions for new road communications have been laid down, when,



FIG. 6.—EQUITABLE BUILDING, NEW YORK
E. R. Graham, Chicago

in fact, the community and their governors have made up their minds broadly what kind of town they want, or what is the nature of the development for which an orderly plan is sought, at this stage it does appear to me that the creation of a design which shall fulfil these requirements, and give definite form to the vague aspirations of the people, which shall satisfy the various needs in their proper order and proportion, neglecting none of the utilities, but so disposing and grouping the various necessary parts in relation to the particular site, its hills or its valleys, that in the natural order there will grow up upon this plan a beautiful city, satellite town, or sub-

urb—this, I maintain, is an architectural problem, one of the greatest of such problems, calling for the fullest exercise of that particular power of planning in which the architect is trained throughout his life. It is the trained capacity for design which should enable the architect to seize upon a mass of requirements and conditions, and by the exercise of his imagination to select the essentials, to subordinate the details, and to weave them all into an orderly and beautiful whole.

This is difficult work; perhaps those who have experience of it realise most fully how much there is yet to learn. Opportunities in this country have as yet come to few, and not always to those best qualified to make the most of them. Both as architects and town planners this opportunity of seeing the work of our colleagues from across the water is welcome, bringing us assistance, and particularly inspiration, from the evidence which it gives of a growing conviction among the American people that if a building is worth erecting at all, it is worth erecting as a beautiful building. There has been too much tendency during the last century, when men were overmuch occupied with industrial and material developments, to regard beauty as a superfluous and expensive luxury. This exhibition is a sign that in America, where that preoccupation was necessarily greatest, there is already an awakening; and it brings us new hope to see beauty being regarded as a necessity of decent human life, as the natural and spontaneous expression of man's joy in his work. Those who believe that, as embodied in the orderly planning and disposition of towns, and in the grouping and architectural treatment of its buildings, beauty, so far from being an expensive luxury, is the most economical source of human pleasure, giving a daily mead of contentment and joy to the succeeding generations of men, who year after year, and maybe century after century, must derive some inspiration and enjoyment as they pass to and fro, will be grateful to our American colleagues for this encouragement.

Chairman's Speech

Sir ASTON WEBB, P.R.A. : I am sure, ladies and gentlemen, you will agree with me that we have had a most delightful, interesting and enlightening lecture from Mr. Raymond Unwin on this very important and interesting question of American architecture. Mr. Unwin, as you know, is himself a master in town planning, and has carried out some of the most successful town plans which have yet been executed, and is also now an official who exercises a beneficent influence on town-planning schemes generally. I suppose we architects all agree that town planning is necessary, and that schemes are necessary, and you have to face the important fact that England does not like schemes, and the Government do not like schemes; they think it is better to go on bit by bit as occasion arises. It is therefore for us, as far as we can, to edu-

age." It is striking that the author is able to deal with so many men and so many buildings in such a thorough and exhaustive way. The construction of Brunelleschi's dome, the work of Florentine artists abroad, the evolution of S. Peter's, the chapter on the Decorative arts, each constitutes a detailed contribution in itself. Yet there is no sense of undue compression or obvious omission.

The historical setting and conditions of creation, without a knowledge of which no building can be appreciated at its proper worth, are dealt with in a graphic and imaginative way. Methods of practice, the use of models, the system of construction of mighty domes, the technique of intarsia work, are described so interestingly that we are carried back into the very age itself; and the insistence on the structural origin of architectural forms, and the analysis of the crafts, link the past with the present and the future.

The Italian Renaissance, like every other style, had its period of fresh and vigorous youth, its culmination, and its decline, and the author analyses with lucidity its origins, its development, and its decay. An admirable chapter on the Revival of Learning introduces the Quattrocento beginnings, when the new cult was first grafted on to the vernacular buildings of mediævalism, "the happy days when the new art led a happy natural life, with no formulas to fetter design and check invention." All lovers of the Renaissance are attracted by the exquisite tombs of Rossellino, Desiderio, and Civitate, "with their classic details used freely in the Gothic manner," but we must not forget the limitations of the work of the sculptor architects, and few ages can hope to maintain so exquisite a standard of execution, and Sir Thomas himself has emphasised a similar point in commenting on Greek architecture. It was inevitable that more conscious theories of proportion, scale, and mass should succeed the charming, sometimes accidental, freedom of the early Quattrocento. We must hope that a closer historical study and a more critical judgment have disclosed the pitfalls of Classicism, the exaggeration of the Vitruvian fetish, the cold dogmas of Palladianism, the bigotry of the orders; yet there is an extremity of freedom that is just as dangerous.

The reader should peruse the chapter on Roman architecture that introduced the first volume of this series, where we are told that, properly regarded, Roman architecture stands in no need of apology. "For all practical purposes, apart from archaeology, it is the only ancient style with which the modern architect need trouble himself." And again: "It is with the architecture of Rome that we first begin to feel at home, because in it we find the seeds of all subsequent architectural growth, during the dark and middle ages, the period of the Renaissance, and down even to our own day."

It is true that the Renaissance of Roman architecture filled in many respects, but in criticising it we cannot

forget that it must form the basis of the modern outlook on design, just as Humanism has influenced the whole trend of modern thought.

Historically the book covers the ground in a most comprehensive way. The description of the Palazzo Medici-Riccardi may be cited as a good example of the clear analysis of individual buildings that will be valuable to the student. There is one interesting point in connection with this building that is not mentioned here or in Anderson. An old engraving in F. L. del Migliore's *Firenze Illustrata* shows the Medici palace as it was built by Michelozzo, with only one central doorway, flanked by two large arches, and small symmetrical ranges of windows above, very like the Strozzi. A study of the plan makes this arrangement clear. The additions were made, and very cleverly made, after the Riccardi family purchased the Palazzo.

A particularly interesting account is given of Michelozzo, who not only worked in his native Florence and in Milan, but was responsible for the introduction of Renaissance architecture to Dalmatia.

The fact that Peruzzi occupies a comparatively small space, and that Sanmicheli is only mentioned, is characteristic of the author, who prefers to search out men and places that have been neglected, and thus fills the book with new light and information.

Bramante and S. Peter's occupy a full chapter, and the passage on the Cancelleria at Rome, and the question of its authorship, may be mentioned as showing that the book is closely in touch with the latest research. The detailed exposition of the evolution of S. Peter's is treated with a masterly thoroughness. Palladio is not neglected.

It is the hardest thing in the world to strike the happy mean between the living freedom that belongs to an early phase of art and the pedantic formalism of its decline. The real artist will free himself from the restrictions of rule and dogma, but the average designer, as our nineteenth-century cities witness to our cost, will degenerate into licence if he insists on the right to freedom without restraint. The vexed question is whether in this large and complex world of ours greater good will come from conscious design based on systematic training, with a basis of reasoned discipline, or not.

Our age cannot boast the environment conducive to the production of great individual art as Florence of the Quattrocento could, and few would maintain that there is amongst us such a galaxy of talent as used to meet in Baccio d' Agnolo's workshop, or in the groves of the Medicean academy.

Sir Thomas Jackson, like Sir Reginald Blomfield from another point of view, is bent upon emphasising in his historical studies the particular doctrine that appeals to his vigorous and independent temperament.

The introduction and the concluding summary, and frequent passages throughout the book, sound the

trumpet call to the partisans of the two factions into which the author would have us divide all schools of architectural thought.

"It may be said that there are but two styles of architecture, the Bond and the Free, and we have to choose between them." There are both Classic and Gothic pedants, "but of these two schools Gothic on the one hand, and what we call Palladianism on the other, are the extreme examples." We might even go further and say that much modern Gothic is more Palladian than Palladio.

There seems some danger that the author, though himself a great traditionalist, may be misinterpreted by minds less capable of thinking for themselves. It is much to be hoped that a wiser and deeper study may teach a future generation to avoid the pitfalls that beset either school of thought when pushed to extremes, and assimilate the underlying principles that belong to every epoch in the evolution of art—principles that have been so ably set forth in the series of books of which this volume is but one.

By acting on principles we can be saved from the deadening fetters of hard-and-fast rules and the indecent extravagances of licence in design. But in art, as in war, and, indeed, in the conduct of life, principles are easy, but their application is difficult, and, being human, the weaker brethren among us need some stricter guidance for our frailty on the way towards attainment.

Here the eternal problem of the golden mean presents itself—how to avoid the rigid formalism of the Palladian rule, yet steer clear of the dangerous cult of asymmetrical picturesqueness.

But though architectural partisanship may lead those with academic tendencies to disagree with some of the conclusions of the book, none can fail to appreciate it as a classic contribution to scholarship, and especially for the insistence on the structural origins of architectural forms.

This artistic philosophy will probably cause a healthy flutter in the architectural camps, and lead to searching questions. Sir Thomas, with his wide scholarship and record of achievement, his grasp of the historical and structural evolution of our art, speaks with authority.

The book is fully illustrated, largely from drawings by the author, partly from Ferrerio and Falda, and partly from photographs. Many of the plates present new subjects to us, or old subjects from a different point of view. Chronological tables add materially to the book's usefulness.

The Cambridge University Press has produced the volume in beautiful form, such paper, print, and binding being rare in these days; and the announcement that a second volume dealing with Renaissance architecture in England may be expected will be welcomed by all who know the writings of Sir Thomas Graham Jackson.

J. HUBERT WORTHINGTON [A.].

Correspondence

UNIFICATION AND REGISTRATION.

4 Raymond Buildings, Gray's Inn, W.C.

To the Editor, JOURNAL R.I.B.A.,—

SIR,—Mr. Perks wishes to secure the best interests of the Institute as he sees them, and he differs in no way in this respect from those whose work he is trying to destroy. He will not help his cause by withholding from the Unification and Registration Committee the credit for striving, as they are striving, to extend and increase the authority and usefulness of the Institute and its reputation in the estimation of the public. He has followed the procedure through all its stages and is quite well aware that we have never considered the inclusion in the Institute of any but qualified architects. "Bringing all architects into membership of the R.I.B.A." means what it says. It refers to real architects and no others; but, inasmuch as there is diversity of attainment and standing in those whom it is proposed to adopt, there will be various classes of members, and this is not a new principle.

The thing that I take strong exception to in Mr. Perks' latest letter is the suggestion that the interests of the Associates are different in any way from those of the rest of the members. They are not different, and it can only injure the Institute if the impression gains ground that any difference exists.

The Institute is asked to receive none but properly qualified architects into membership. I have endeavoured to bring home to the provincial societies the need for recruiting their membership and for taking all steps to ascertain the qualifications of the men in their districts with a view to including them ultimately in the membership of the R.I.B.A., but there may be a rude awakening in store for those who profess to be and call themselves architects without having imposed on themselves the restraint that is necessary to a professional man, and without having taken much trouble to qualify themselves for a profession which is also an art.

ARTHUR KEEN [F.].

THE SOCIETY FOR THE PROTECTION OF ANCIENT BUILDINGS.

20 November 1921.

To the Editor, JOURNAL R.I.B.A.,—

SIR,—The interesting signed review in your issue of 12 November on the Annual Report of the Society for the Protection of Ancient Buildings seems calculated to draw a reply from that Society. Perhaps, however, as the writer is himself a member of the Society, it will meet the case if a fellow member may be allowed to make a few comments on some of his conclusions.

The tenets of the Society have been the cause of many a fight in the past, but here we have something

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approaching—though I hesitate to call it—an attack of a new sort coming from a fresh and unexpected direction. The writer would appear to have joined a kind of forward branch of the Society, to have outstripped it, and the hoofs of this advance guard are bespattering the main body with mud, if, indeed, Mr. Forsyth's subtle remarks, tinkling with musical metaphors, can be described as such!

The Society for the Protection of Ancient Buildings, however, is not greatly concerned to repress its more exuberant members in their endeavour to "go one better" than the Society, or to prove that its views can never change. I think it is indeed more probable that Mr. Forsyth's own views on reparation of buildings have developed since he became a member of the Society, and this change may account for the different perspective with which he views its activities.

When a great building has been scaffolded for repairs it is obvious that everything that can be done must be done while the scaffolding is there; otherwise either of two things follows, the building will become neglected or it will lead to the need—which becomes the extravagance—of rescaffolding at no distant date. From the Society's point of view there is in the erection of costly scaffolding an undeniable temptation to overdo the work of reparation, but this is one of the many difficulties that have to be faced, and faced constantly. Indeed, not infrequently it has become the Society's duty to urge additional expense in scaffolding to avoid what is sometimes done—namely, to erect one line of scaffold poles and cut holes in an ancient wall for the inner ends of the put-logs.

The Society has always maintained that every case of repair must be judged on its own merits. Mr. Forsyth himself declares that "no two problems in repair are alike," and yet from two cases, which he quotes, he proceeds to generalise and affects to find a change in the Society's methods, which he calls "wholesale anticipated repair." Of these two cases one was carried out by the Society, the other by the Office of Works, the latter case being brought forward as having been "approved" in the Annual Report. The approving these operations of the Office of Works seems to consist of the following remark on the repairs to Rievaulx Abbey (p. 34): "Visitors should hesitate before condemning what may at first sight appear too drastic a treatment." This is, to say the least, a somewhat guarded "approval."

Mr. Forsyth's strictures on or, at any rate, doubts concerning the methods of repair adopted by the Office of Works may or may not be justified, but his fallacious comparison of ferro-concrete with the use of iron rods and cramps in stonework seems to show that he misapprehends the qualities of the former material. The merit and mystery of ferro-concrete is that its combination of steel and concrete forms one homogeneous material, not two, like iron and stone, which by the help

of moisture usually war against one another to the disintegration of both. But even they, as Mr. Forsyth will well remember, on the parapet of Bloxham spire do sometimes appear to be incorruptible.

The prime danger of introducing ferro-concrete into ancient structures does not arise from the corrosion of the metal, but from the expansion and contraction of the material due to changes of temperature, these being virtually equivalent to what takes place in metallic steel. In short lengths, or when deeply embedded in masonry and not liable to great changes of temperature, it may be reasonably safe to use ferro-concrete in old buildings. But in long lengths or exposed situations it may lead to rupture and damage unless provision for its movement is possible, and in old buildings this is by no means always the case.

Mr. Forsyth's reference to Continental practice in dealing with ancient structures is interesting, not because the methods and practice in this country seem likely to assume the drastic character which Continental restorations too often take, but because some of the more recent examples of reparation across the Channel appear to be even more restrained and conservative than anything that has been done in our own country. This is, indeed, a welcome change and one that we fervently trust will develop. When we bear in mind the vast amount of rebuilding and reinstatement to be done to ancient structures in the war area, we can but hope that this changed influence may tend to check attempts at sheer reproduction of mediæval work.

F. W. TROUP [F.].

HIGHER BUILDINGS FOR LONDON.

8 December 1921.

To the Editor, JOURNAL R.I.B.A.,—

SIR,—Statements have appeared in the London Press to the effect that the Royal Institute of British Architects has recommended that higher buildings should be permitted in London. There is no foundation for these statements.

The matter is under consideration, and the considered opinion of the Council of the Royal Institute will be published in due course.—I am, Sir, your obedient servant,

ARTHUR KEEN [F.].
Hon. Secretary R.I.B.A.

27 Abingdon Street, Westminster, S.W.1.

3 December 1921.

To the Editor, JOURNAL R.I.B.A.,—

DEAR SIR,—On 25 June last you published a strong letter of protest against the entirely unauthorised publicity methods adopted by the Institute Building Act Committee.

I have no information as to whether this special committee has ever been sanctioned or reappointed by our

present Council, but it appears that, authorised or unauthorised, the committee in question is fostering a widespread publicity campaign before its "interim" report has even been considered by the Council.

A letter in this morning's *Times* from the leader of the committee states that "the scheme has now been referred by the Committee to the Council for consideration."

Such high-handed and unconstitutional procedure is a direct challenge to the authority of our elected Council. It is an unheard of thing for any committee to publish broadcast its conclusions, whatever they may be, before they have even submitted their report, and the Institute cannot allow itself to be stampeded by any campaign of publicity, in which, from its nature, constant mis-statements are made.—Yours faithfully,

W. R. DAVIDGE [F.].

PROPOSED TESTIMONIAL TO MR. H. G. TAYLER AND MR. G. NORTHOVER

15 Great James Street, Bedford Row, W.C.
25 November 1921.

To the Editor, JOURNAL R.I.B.A.,—

SIR,—I suppose that, with the probable exception of Mr. John Slater, I remember as much about the old staff of the R.I.B.A. as any member of the Institute, and I have not forgotten to mention their worth when making my customary addresses on the Annual Report.

I have read with much pleasure the well-deserved eulogiums passed upon Mr. Tayler and upon Mr. Northover in the JOURNAL of 24 September, 22 October, and the 12th inst., and I believe that I shall have the members of the Institute with me in the suggestion I now make that we offer our two old friends some permanent testimonial to mark the esteem in which we hold them.

I now venture to ask the members of the Institute to contribute to such testimonials, and suggest that the subscription to each shall not exceed 10s. from each member. The nature of the testimonials can be determined when the sum is ascertained. It would facilitate the matter if the Chairman of each of the Standing Committees would bring the subject before his Committee, and this suggestion might apply to the President of each of the Allied Societies.

I shall be pleased to become the Treasurer of the fund, and to receive the subscriptions, which will be duly acknowledged; and I propose that the list shall be closed on Saturday, 21 January 1922.—I am, yours faithfully,

WM. WOODWARD [F.].

CONJOINT BOARD OF SCIENTIFIC SOCIETIES

Mr. H. D. Searles-Wood has been re-appointed to represent the Institute on the Conjoint Board for the year 1922.

Architectural Education

BY ARTHUR J. DAVIS [F.].

[Extracts from a Paper read before the Manchester Society of Architects on 9 November.]

I HAVE known for some time that I should have the honour of addressing you on the subject of architectural education, and I have therefore made a point of ascertaining the general feeling of the profession and the views of practising architects, professors at the schools, and of the students themselves, as to the advantages and drawbacks of our existing systems.

It is not necessary to remind you that the old method of articles has died a natural death, and that the schools which now exist in London and our large provincial centres are giving the student a far more comprehensive and general knowledge than it was possible to attain under the pupilage system.

In the period just referred to architecture was considered mainly from the professional standpoint, and, with few exceptions, the architect was looked upon as a business man and a constructional specialist, competent to deal with the numerous problems and difficulties of administration, construction, and organisation met with in the course of his daily functions.

The power of planning and designing, as an artist, which we now recognise as being the most valuable quality, was in many cases considered of minor importance. It was not sufficiently understood that these artistic qualities could be developed by a sound education without coming into conflict with the other practical attributes, but, on the contrary, would form their most solid foundation.

The night schools supplemented to a certain degree the knowledge an article pupil would acquire, but in time even these excellent institutions were considered insufficient, and eventually the architectural schools, as we now know them, came into being and gradually replaced the pupilage system altogether.

However, I think the pendulum is now inclined to swing too far in the direction of theoretical training to the detriment of practical experience. In all educational establishments it is only natural that theory is preferred to practice, and the constructional and professional side, although dealt with, is necessarily only considered from a school standpoint. The syllabus of our principal schools takes the novice through the various stages of design, and teaches him history, construction, and mathematics. His training now covers a maximum period of five years, and, generally speaking, deals very adequately with most of the theoretical knowledge a young architect can acquire.

Indeed, I venture to say that a sound office training is in after life the most valuable factor in an architect's career, and it is only when our system is so

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arranged as to enable the students to become familiar with practical work, and simultaneously carry on their theoretical studies, that we shall obtain the best results.

It has been suggested that professional practice and office administration might be taught in the schools, but when one remembers the hundred and one problems which face the architect in his constant dealings with clients, contractors, legal matters, correspondence, etc., I do not think it is possible to include this in any curriculum.

In my opinion, one of the fundamental weaknesses of our present school training is that, in order to pay their way and produce a satisfactory yearly balance-sheet, the schools are obliged to charge the students comparatively heavy fees and to accept, for financial reasons, young men who have no special ability and who will never become architects of any standing. It is common knowledge that the profession is overcrowded, and yet we see that increasing numbers of students are entering the schools, although it is well known that a large proportion have neither the vocation nor the necessary qualifications to make successful careers.

Although the curriculum in the schools has been extended from three to five years, and the subjects taught have been considered with great care and discrimination, these are so numerous and cover such a wide field that the period allotted to study is insufficient, especially if it is taken into consideration that a larger proportion of the student's time during the last two years is presumed to be spent in an architect's office. The haste with which a man is rushed through the many fields of instruction savours somewhat of cramming, and although nowadays the fashion is to speed up, yet I think that he should be given opportunities to extend his studies over a far longer period should he consider it desirable.

The useful work done by the schools has been recognised by the Royal Institute of British Architects, which bestows the title of "Associate" on students of recognised schools, who have completed their fifth year, provided they pass an examination in professional practice.

However, if it is agreed that my remarks are in a measure justified, it will, no doubt, be asked: Can these conditions be improved? How are the difficulties to be overcome? And in what way can these objections be met?

Under the first heading we find young men possessing insufficient natural ability admitted into the schools for financial reasons, and the exclusion of potential students of merit who are unable to bear the high cost of training.

Under the second, that insufficient opportunities are afforded to students of acquiring professional knowledge during their period of training, with the conse-

quent divorce of theoretical and practical instruction; also that the time allowed by the schools for the covering of the very large field of study is insufficient.

With regard to the first objection, I suggest that it would be policy to make the schools practically independent of students' fees. This advantage can only be attained by the granting of subsidies, either from the State or from other sources.

It may, at first glance, sound a difficult problem to solve, but I would point out that this system has been in operation on the Continent for a considerable number of years, where all the higher schools are supported by the State, who pay the professors' salaries, for the upkeep of the special buildings, libraries, museums, etc., together with their technical equipment.

Many people who have a knowledge of establishments controlled by the State will be inclined to object to this policy on the score that it necessarily involves interference and numerous visits from officials who may possibly prove a hindrance to the smooth working of the system, and may oppose or delay innovations with which they are not in sympathy. I know that in this country at present these fears are well founded, but I must point out that this kind of supervision is not really a necessary adjunct to State aid. For instance, in France, although the nation foots the bill, it appoints a Minister of Fine Arts, a man of wide views and broad sympathies, to control the work of technical schools and similar institutions.

At the *Ecole des Beaux-Arts* it has been found necessary by experience to ensure that before any student is allowed to belong to the school he should have passed a very severe test, the purpose of which is to divide the sheep from the goats. From the start the undesirable student is eliminated. If he were admitted, he would only fall out during the latter years of training, after having occupied valuable space and wasted his own and his professor's time.

At present I fear that all our architectural schools shelter too many of this type of man, who is accepted for the financial support he brings, and I am informed that already professors are being assailed by demands from such of these mediocre students who have finished their training and find themselves unable to obtain work. In time these men become something of a danger to the profession—for many of them, failing to obtain work in architects' offices, drift into acting as draughtsmen for firms of specialists, who are thus enabled to produce inferior designs which compete with work which should be entrusted to a capable architect. I am quite aware that the examination system is not ideal for ascertaining the knowledge of all candidates, and that it has the disadvantage of sometimes eliminating aspirants of real merit who do not possess the knack of passing these tests, but at present no better method seems to have been arrived at. In any case, it is surely safer to

test a man's knowledge by examination rather than by a reference to his banking account.

I will now try to answer my second objection, which had reference to the insufficient opportunities for the student to obtain practical experience, and the lack of time allowed for the vast number of subjects for him to master.

In my opinion it is a mistake to divide the different stages of education in the schools into a term of years. We hear of first, second and third year students, which means that the knowledge acquired during the various terms is spread over a definite period, involving the constant attendance of the student. I suggest that the curriculum should be extended over a much longer period, and arranged in terms of advancement rather than of years. All students, after they have attained a certain proficiency and passed preliminary tests, should be allowed and encouraged to work in offices, travel, or to acquire architectural knowledge by other than school methods. It should be possible for them to work for an architect and only enter for school competitions when they have time at their disposal, and no penalty should be attached to this procedure. The authorities would define the minimum amount of school work to be produced each year.

It may be safely stated that in every office there are busy and slack times, and during the latter the permanent office staff can adequately cope with the work. When there is extra pressure, it would be greatly to the architect's advantage could he call upon the schools to provide him with help for competitions or any special jobs with which his usual staff are unable to deal. Work of this nature should be paid for by the day or the hour, and the student would thus be enabled at least partially to earn his living, while at the same time pursuing his studies.

In England there may be objections, although I do not think there is any insuperable difficulty in adopting the foregoing suggestions. They have been in practice for generations in France, where some students take four years to complete the course, and others as many as ten. There it is recognised that the man who takes longer over his training is not necessarily a backward student, and that no school, however efficient, can impart all the knowledge required in architecture. It is also appreciated that intensive culture in the end rarely produces the best results. It is believed that a student should be encouraged to organise his own life, and so long as he produces a sufficient quantity of work to justify his retention in the schools, he is in every way permitted to develop on his own lines.

YORK AND EAST YORKSHIRE ARCHITECTURAL SOCIETY.

Mr. Alan E. Munby, M.A.Cantab, has been unanimously elected president of the York and East Yorkshire Architectural Society.

THE BUILDING RESEARCH BOARD.

A special meeting of the Science Standing Committee was held at the Experimental Station of the Building Research Board on 24 November. A full inspection of the premises was undertaken, including the stores, testing house, laboratories, balance room, and furnace room. Mr. Weller, the director of the Board, and his staff explained, with demonstrations, the scope and extent of the research work undertaken at the station and in various parts of the country. On the motion of Mr. H. W. Barrows, seconded by Mr. Francis Hooper, a cordial vote of thanks was passed to Mr. Weller and his staff for the reception which had been accorded the committee.

CIVIC EDUCATION LEAGUE.

The Civic Education League is organising a visit to Paris, from 27 December 1921 to 10 January 1922, for the purpose of giving those interested in sociology, regional survey, industrial conditions, local government and the civic arts an opportunity of studying these subjects under conditions of a character different from our own. The programme will include visits to parliamentary institutions, local government and educational centres, places of historical and regional interest, art galleries and churches. Visits will also be made to outlying districts of Paris. Particulars as to the cost, etc., of the tour may be obtained from Miss Margaret Tatton, 65, Belgrave Road, S.W.1.

REFORM OF THE LONDON BUILDING ACTS.

The Council of the Institute have received an interim report from the London Building Acts Committee, and referred it to the Art, Practice, Science, and Town-Planning Committees for consideration and report.

THE STAFF FOR R.E. SERVICE.

The Council of the Institute have directed that a letter should be sent to the War Office protesting against the unsatisfactory status of architect members of the Staff for R.E. Services.

GOVERNMENT ARCHITECTS IN INDIA.

A letter from the Institute has been directed to the India Office pointing out the effect of recent legislation on the status and prospects of Government architects, and urging that, in the interests of the efficiency of the service, steps should be taken to guarantee a greater security of tenure for these officials.

THE SMOKE ABATEMENT EXHIBITION, 1922.

Mr. Ernest Newton, R.A., has been appointed to represent the Institute on the Council of the Smoke Abatement Exhibition for 1922.

RETIRED FELLOWSHIP.

Mr. Walter Pott [F.] has been transferred to the class of Retired Fellows.

State-aided Housing Schemes

ABANDONED SCHEMES: QUESTION OF ARCHITECTS' FEES:

DISCUSSION AT SPECIAL GENERAL MEETING, 28 November 1921.

The President, Mr. Paul Waterhouse, in the Chair

The PRESIDENT: I call upon Mr. Adshead to move a motion. I may say I do not propose to speak in the debate, but if from my knowledge I can supplement anything, I shall be at your service.

Professor ADSHEAD [F.]: Mr. President and gentlemen. —In moving these resolutions, I think it is the wish of the meeting that I should move, in the first place, the first section. Therefore I will commence by reading the first section and saying that I propose the following motion:—

"That while re-affirming the objections to Memoranda Nos. 51 (D) and 52, which led to the resolution of 4 July 1921, this meeting recognises the bona-fides of the Ministry in putting forward Memoranda Nos. 51 (D) and 52 under the impression that the R.I.B.A. had agreed thereto."

I ask you first to vote upon that section. In doing so, I should like to add one or two words, having been one member of that Committee which was concerned in drawing up these unfortunate Memoranda. I feel that, having said that, I need to explain my position in being here now after having been a party to such Memoranda. The whole circumstances of the negotiations between the Ministry and the Institute were of a very exceptional character. I was one of those who were put on the Committee practically when the whole work had been done. I attended all the meetings that I was asked to attend: they were only two. And at those meetings it was apparent that for the one or two of us who were new members it was quite impossible to dig into the very foundations of the Memorandum; one could only attempt to improve it in one or two points, and leave the rest to the future. Unfortunately, the future has proved very disappointing. The essential features of that last Memorandum were that an entirely new method, outside all tradition and experience, had been introduced in the charging of fees, the method of charging according to type. And though the Committee felt at the time great hesitancy as to how it would be received, it appeared to the Committee that it was, under the circumstances, a reasonable, though possibly a rather picturesque method. However, greater consideration—for which we should be thankful—has shown us that the method was one which was impracticable. And I think it has been the general feeling that the system was wrong from the beginning. The position which the President has tried very hard—and, I think, very successfully—to retrieve is to reopen negotiations. And after a long interview, at which I was present, we found that these negotiations could only be reopened by practically whitewashing the action of the Ministry in stating that the Memoranda had been approved by this Institute. And the only way we can reasonably do that is to state that the Ministry did it under the impression that it had received our consent because it had received the assent of the Council. If we do that, the terms practically are that they will reopen negotiations. And I think that is about as far as we have got.

Mr. H. V. ASHLEY [F.] seconded the motion.

Mr. J. GUNTON [F.]: I know little about the matter, but it seems to me that the action of the Sub-Committee was perfectly ridiculous; they misconceived the intention of the body of architects altogether. I should like to know who selected these gentlemen, who they were, and what were the instructions which were given, according to the minutes. They have mis-

represented entirely the intention of any architect; they have let us down. I object to attempting to whitewash them. Let us stand to our guns, and settle it in a proper manner. We ask for a ridiculous amount; you can see it is a miserable amount, 2½ per cent.; it does not pay for clerks' time. I want to know the names of those who represented us, and what were their instructions when they were asked to meet the Ministry.

The PRESIDENT: There is evidently a misunderstanding on the part of the last speaker. The expression "whitewashing" is not referable to our Committee. There was a mistake on the part of our Institute. The whitewashing was applicable to the Government's action, and I venture to think the line adopted by the last speaker is not in accordance with the facts.

Mr. GUNTON: That does not answer my question, Sir; I asked for the names of the Committee, and what were the instructions that were given to them. Had they a free hand, to do what they liked? They must surely have had definite instructions.

The PRESIDENT: The action taken was that the Committee in question negotiated, and referred the matter back to the Council once or twice; it was a question of to and fro from the Council to the Ministry.

Mr. GUNTON: And that does not answer me. I want to know the names of the Committee, and to know the instructions given to them.

The PRESIDENT: There is not the slightest difficulty in supplying the information required.

Mr. GUNTON: Thank you. I have just had the names supplied to me by a member. Had they instructions, or were they told they could do what they liked?

The PRESIDENT: I will ask the Secretary to answer that.

The SECRETARY (Mr. MacAlister): The Council empowered these representatives to go to the Ministry and negotiate a draft agreement, and bring it back to the Council.

Mr. GUNTON: Did they do that?

The SECRETARY: They did.

Mr. GUNTON: And the general body accepted it?

The SECRETARY: The general body rejected it.

Mr. J. H. KENNARD [F.]: I rise to oppose the first resolution, because it seems to me that, as Professor Adshead admitted, it is nothing more or less than an attempt to whitewash either the Ministry of Health or the Council of this Institute. On 4 July the Secretary stated that the Ministry had been informed that the Council had approved, and that the matter had now to receive the sanction of the general body. But the facts appear to be that the letter which was written by the Secretary to the Ministry of Health read as follows:—"I enclose herewith a copy of the draft for General Housing Memorandum No. 31 which Mr. James S. Gibson submitted to the Royal Institute Council after his Conference at the Ministry of Health. I am directed to inform you that my Council have agreed to accept this Memorandum, and that in due course it will be submitted to our General Body for inclusion in our published Scale in place of the existing Scale." I do not say that they did it knowing that this body could approve of it, but it is reasonable for them to suppose that the only point which you reserved was that of the question of inclusion in the Scale—that is to say, being printed in the Scale was reserved, not the question of submission to the general body at all. If those last words had been left out, that letter would have been a far stronger document. I find also that the deputation which went down to the Ministry of Health to draft these two documents was stated to be the work of the Practice Committee, but it seems that only three members of the Practice Standing Committee were appointed on it. Out of the eight names, three are members of the Practice Standing Committee; the rest appear to have been added. I checked them before I came. Do the Practice Committee conduct these negotiations, or the general body of the

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Institute? If the question referred to the Practice Committee, surely other men than those who went down could have been found? The whole thing has been too badly muddled, and it is now too late to attempt to whitewash anybody, or to acknowledge the documents at all. Members of this Institute expressed their opinions very clearly on 4 July in saying that they would have nothing to do with them, and I am for standing for that. The proper thing is to break off negotiations altogether and fight out a test case. It is an easy matter to fight a test case with any Council in a straightforward way. It can be intimated to the member in question; he can be told it is a friendly case. No doubt the Council will go to the Ministry, and, if necessary, to the Court of Appeal. Then we shall get a decision which is binding. I am out for throwing the whole three resolutions that are to be proposed to-night to the winds, and then get on with a test case. It is the proper thing to do. I have compiled particulars which show that six architects—and they are only a few cases of differences in Scale which have come to hand—six architects who have had among them 564 abandoned houses, stand to lose £6,815 on the difference between these two scales, and that is too much money to give up, even to whitewash the Council of this Institute.

The PRESIDENT: I again point out there has never been any suggestion of whitewashing the Council of this Institute.

Mr. ASHLEY: I rise with great diffidence, as I have never spoken at a public meeting of the Institute before; but, as a member of the Council, I should like to draw attention to a letter which appeared in *The Builder*, I believe, from the last speaker. It stated: "It is common knowledge that the Ministry of Health, in consultation with the Practice Committee of the R.I.B.A., evolved all the documents and Memoranda 51 (D) and 52 which were issued by the Ministry of Health to Local Authorities." Sir, I think, as a member of the Practice Committee, it ought to be clearly understood by this meeting that up to the time that these Memoranda were issued the Practice Committee of this Institute had no knowledge whatever of either of these Memoranda, and that the information contained in this letter is entirely misleading.

Mr. T. ALWYN LLOYD [F.]: As one who turned up at the last meeting and expressed himself rather strongly, on the same lines as Mr. Kennard, I feel we are rather in danger now of wasting valuable time in recrimination and in going over old ground. I would like to appeal to those of my friends who disagree with the line I propose to take on this matter to pass this first part of the resolution which has been moved by Professor Adshead, for this reason. We know the Ministry are out for all they can get, and they have overdone that method very much indeed. But I am satisfied that the Memoranda were published by them in good faith. I think the mistake was our mistake; if anybody is to be blamed, it should be our representatives. It seems to me that by adopting this resolution we do not weaken our position in the least. If we admit the Ministry did it in good faith, we are no further from our goal than if we acted as our friend suggests. I think this method is more likely to reach the desired goal, and I therefore say we should at any rate pass this first resolution, which does not seem to be harmful to our cause, and then get to the more important business, which is to decide the fees which we intend to press for. ("Vote.")

The PRESIDENT: If you wish to divide, I ask you to let me say one word more. The word "whitewash" has been used, a very good word in the English language, but in this connection it is a pity, because it has cast a wrong glow of colour over the proceedings. But I want you to understand that in what I want to do, in your interest here, I do not want to whitewash anybody or anything. The people who are to blame are the Council of the Institute, and they can take the blame for an unfortunate thing. But when there has been a mistake you have to do what you can to recover it. Both the trains are off the rails, and until they are put right you cannot proceed with the locomotion. What Professor Adshead has put before you is, as

far as I can see, the simplest way of getting the result we want, which is not to "get our own back" in a scrap with the Government, but to get what we deserve as architects.

Mr. GUNTON: I see no objection to the resolution, and I agree with Mr. Lloyd. The thing is over, and we must now do the best we can.

Mr. KENNARD: I am sorry to trouble you twice on one question, but it seems to me that even before the meeting of 4 July—members have probably all read the account of that meeting—when our deputation went to the Ministry of Health the Ministry practically placed a pistol at their heads and said: "You will either have to take this or you will get nothing." I think Mr. Gibson told us that at the 4th of July meeting, and it is not a dignified thing to do to climb down. It is better to fight it out and get a legal decision which we can stand on; it will be quicker and more easily done, to my mind. At present the Ministry are placing all sorts of interpretations on D 51 in an endeavour to minimise the fees in every way. As regards the comments in my letter to *The Builder*, which appeared on Friday last, it was made perfectly clear at the last meeting that the Practice Committee were responsible for that document, or that impression was given; and one would certainly expect the Practice Committee of this Institute to be responsible for such a document. I accept full responsibility for everything which is in that letter.

Mr. MAURICE E. WEBB [F.]: I stand up in a white sheet as a member of the Council. I understand that the Council have made a mistake. I am not prepared to admit that straight away, but I do hope that in voting on this question everybody in this room will realise that housing is a national need, and that this question has been going on for two years and becomes a little noxious. The profession ought to do the best it can for housing. I was a member of the Council, and we deputed the Committee to see the Ministry, and we agreed to abide by that decision, and that is what the Institute is being asked to do to-night. The Council represents an Institute of over four thousand men, and it must appoint somebody to settle the thing. It is bound to result in hardship to some and not to others, but I think in all this question of housing we ought to consider that fees are not the first thing. We have to remember that housing is a national need and architects must pay their share. I only ask you when you vote on this question to remember that the question of fees is not the first thing to consider. I know there have been hardships, but the Committee appointed did, as far as I know, do their best to minimise those hardships and to get the best fees they could. As far as I know, they have done so. The Ministry of Health say: "We will not negotiate with you any more unless you agree to appoint three men who have power to settle the thing." Surely the Institute can do this; we can stop short of fighting in the Courts, which would be more costly and would cause more hardship all through the profession, and to men who cannot afford to pay solicitors' and barristers' fees. I think it is far better to settle it now, and to go to the Ministry of Health and get something definite which will not lead to disputes in the Courts.

Mr. J. G. BURGESS [Licentiate]: I do not quite agree with the last speaker. It seems to me, as an ordinary member of the Institute, that whether the Council, individually or collectively, admit they have made a mistake, the fact is that they have, and it is just as well to recognise that fact and to endeavour to make the best of it. I rise to support the resolution which has been moved by Professor Adshead. I think it is the best way out of the difficulty. The difficulty is, to some extent, of our making; we may have been unwise in the delegates whom we appointed. We do not know all the circumstances, and so we ought not to judge them unfairly. We consider they did not do so well for us as they should have done. I think we should support cordially Part 1 of the resolution.

Mr. GUNTON: To appoint three strong men, and give them definite instructions and see that they carry them out, is

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the way of getting out of the present *impasse*. Otherwise the Ministry will not meet us at all. I think the most dignified course is to settle up. Do not let the thing go on. We have had no definite reports from the men who went as to the impressions they received of the men they met. Is it likely that we shall be treated in the same way next summer if we climb down now? Would it be a fair and open discussion with the Ministry, as far as you know, sir?

Professor ADSHEAD: I would like to say this, because I know something of the way in which we were received. To my mind it was in an absolutely fair way, and it was not at all what was stated by one of the speakers—namely, that we presented a case and that we had to accept what they offered us or go home.

Mr. BURGESS: It seems to me that the important thing we have to consider to-night is the question of the men we are going to appoint to negotiate for us, and the method in which they will be appointed; and if this first part of the resolution will assist us to get back to negotiations, I take it that on the other resolutions we shall have an opportunity of framing the machinery by which the negotiations will be conducted. That is what we want to concentrate on. In that case I do not see any particular harm in this first resolution.

The PRESIDENT: Does anybody else wish to speak to the motion? If not, I will put it.

The first resolution was put, when there voted in its favour 24, against 2.

The resolution was carried.

Professor ADSHEAD: I now put the second section of the resolution:—

"That the Ministry of Health be requested to amend the terms of the Memoranda in question."

That is the question which naturally follows from the first.

Mr. ASHLEY: I have pleasure in seconding that, Mr. President.

Mr. KENNARD: With regard to that resolution, I would like to be perfectly clear on one point, and that is that the Ministry of Health regards both those documents as an accomplished fact, although we do not. And if you ask them to amend a document which they regard as an accomplished fact, are not you in danger of acknowledging that document yourself? I have had a lawyer's opinion on this point, and he considers that you are. In that case, if you pass that resolution, you are putting your heads into the lion's mouth.

A MEMBER: Have not we repudiated that D 51 in the other resolution?

Professor ADSHEAD: We reaffirm our objections to this Memorandum, and I do not think we acknowledge our acceptance of it by simply amending anything. We can, of course, take any document and amend it. We do not acknowledge it as having been previously approved.

The PRESIDENT: The attitude of the Ministry, as explained to me by Professor Adshead, is this: "We are always ready to treat any hard case individually on its own merits; we are also willing to hear sympathetically any complaint you make as to a Memorandum sent forward by this Ministry. Therefore, if you regard it to that extent as a Memorandum, we have something to go upon." That is the point.

Mr. KENNARD: Then you do propose to acknowledge this document, although the general body of this Institute repudiated it on 4 July? Is that so?

The PRESIDENT: To the very modified extent which Resolution No. 1 admits, certainly.

Mr. KENNARD: Can we use any other word instead of "amend"? Could we have some word which did not commit us? My legal adviser tells me this is acknowledging the document. It seems it is very important not to recognise those two documents. Once we recognise them, I know enough of the Ministry of Health to know perfectly well that you will be up against a stone wall.

Mr. PERCY TUBBS [F.]: Might I suggest that, in view of the fact that it is obvious that this Memorandum D 51 will

inflict considerable hardship upon a number of architects who have already discharged their duty and prepared their plans and specifications under the original Memorandum, the Ministry be asked to cancel their unfair Memorandum D 51 and honourably regard their Memorandum 31, which has already cited a very much reduced scale of fees, much below the Royal Institute's scale as laid down for the general guidance of architects?

Mr. BURGESS: I do not agree with Professor Adshead's remark that Resolution No. 2 more or less follows from No. 1. I think they have acknowledged the bona fides of the Ministry in putting forward Memorandum D 51. It does not necessarily follow that we should acknowledge the Memorandum. In fact, we have repudiated it, and I do not see how we can ask them to modify a thing which we have repudiated. As far as we are concerned, it does not exist. I agree with Mr. Kennard that to acknowledge it would very much weaken our position. We should make a strong point of asking the Ministry of Health to cancel that, and reopen negotiations right from the start, and have a clear field. I do not see the reason for that Memorandum. Under Memorandum 31 architects accept the customary two-thirds. This may have been high, considering what the work was, but surely it is only a question of modifying that fraction; you can call it half, or anything we can agree to; it would be much simpler.—("That would be amending.")—I do not think so, because Memorandum 51 is a thing which involves many other things. You have to decide what is a separate design, and so on. The solicitor's point of view is that it makes it difficult for the simple-minded negotiator to see the results at once; whereas if it is a question of half or two-thirds, he can work it out easily and see what a scheme will let him in for. I say we should ask the Ministry of Health to cancel that.

The PRESIDENT: I seem to be always speaking, whereas I did not intend to intervene. But I must clear up one misunderstanding. The reason we ask for amendment is because amendment is what we want. We want improvement on that. It does not matter if it is improved out of all knowledge; in that case, so much the better for us. But "amend" is the right word to use in approaching the Government on the subject.

Mr. H. W. CUBITT [A.]: There is one feature we may have lost sight of, and that is that this Memorandum brings in a new method of arriving at fees, and that is the price per type of house or houses. I feel that is a very dangerous precedent, and my strong objection to that Memorandum was largely based on that view. I agree with previous speakers that we should be strengthened in our negotiations if we did not pass the second part of the resolution. We should be better off, having gracefully acknowledged the goodwill of the Ministry, in spite of the fact that it was the result of a misunderstanding, and so on, by the Council. I think we have gone as far as we need to go in courtesy or fairness, and I think it will be better if we withdraw the second part of the resolution. I think if we once admit the existence of this Memorandum it will be taken as the basis of all our negotiations, and that the price per type will be the thing which must be amended, because I think we should feel it is an impossible basis to discuss at all. If I shall be in order in moving an amendment, I propose that this second paragraph of the resolution be omitted.

The PRESIDENT: That means you will vote against the resolution?

Mr. CUBITT: Yes.

Mr. KENNARD: I would like to propose an amendment to that second resolution, which is that the wording be "That the Ministry of Health be requested to withdraw the terms of the Memorandum in question." ("They will not do that.")

The PRESIDENT: I can only explain that you have to fight with certain weapons, and if the battle-axe will not do you must use something else. Do you wish to move that?

Mr. T. GEOFFREY LUCAS [F.]: May we have the terms of the third part of the resolution read, so as to see how far it bears upon this?

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The PRESIDENT: Certainly. Will you read No. 3, Mr. Adshead?

Professor ADSHEAD read the resolution:—

"3. That three members be appointed with full powers to agree with the Ministry upon a scale for abandoned work within limits prescribed by the Practice Standing Committee in consultation with interested architects."

Mr. KENNARD: Is this second resolution really necessary? It seems to me we have gone back to the subject with the Ministry in Resolution 1, and I do not see the necessity of No. 2 at all. The whole thing is contained in No. 3, unless it is thought to be necessary as a matter of form to pass this resolution before the Ministry will deal with us at all. But surely they will deal with us after passing No. 1, and if we have done enough to get back on friendly terms with the Ministry in passing No. 1, why have No. 2? You can now pass straight to Resolution 3.

Prof. ADSHEAD: I did not think there would be discussion on No. 2, but the point of it is to enable negotiations to be opened again, to get powers from this body, so that the Institute can approach the Ministry. There has been no official approach since the last negotiations, and it seems the natural way to do it by this resolution. I admit that the actual word "amend" would appear to this body as in some way a recognition, at any rate, that an original Memorandum which we approved of existed; but, as the President said, it appeared to us who drew up this resolution to be the only word we could use properly to satisfy the Ministry, and we hope it will satisfy us. You will realise from No. 3 that we are very well safeguarded, and in such a way that we have no intention whatever of making it merely an amendment of a few words in a clause or two; the intention is, as I said, to strike at the very roots of the principle upon which the Memorandum was drawn up. The intention is that we should amend it right out of recognition. Personally, I should like to see it go through; but I do not feel it is the very strongest point in what we are bringing forward; it is not one of the most fundamental of the resolutions we have. We want from this body some sort of authority to reopen negotiations.

A MEMBER: Would it do to say that the Ministry be requested to reopen negotiations?

Mr. ASHLEY: These resolutions were agreed to and approved by a very representative body of the housing architects and the Practice Committee, at a very full meeting, and after about three hours of discussion. Unless there is a very vital objection to the resolution, I think it should be put as read.

Mr. TUBBS [F.]: Can we say "re-draft" instead of "amend"?

The PRESIDENT: My view on the subject of the word "amend" is that it is one of the most useful words in the English language. I have seen a thing so amended that you would not recognise it. I think it will be an encouragement to re-draft, and I hope it will lead to a substituted Memorandum. Have you anything to say to us, Major Barnes?

Major H. BARNES, M.P. [F.]: I do not know if I am fully possessed of the exact position. I was in this negotiation on the question of fees at the commencement; but I rather think I dropped out of it after Memorandum 4 was issued. I do not know that I have had anything to do with negotiations which led up to Memoranda 51 (D) and 52. But, as far as I understand the position, Memorandum 4 was put out when the housing schemes were in full swing, and we thought everything was going forward to a good finish. But Memoranda 51 and 52 came out when it was decided to cut down the housing schemes. I gather that is the position. On this particular point here, I do not think this resolution No. 2 is very vital either way. As far as I see it, what has happened has been that the Ministry, I think, in good faith, has put out this 51 and 52, and they want, I take it, to shield themselves from imputations of bad faith. And we have relieved them of that. And, while that is so, there still remains the question of settling what we are going to agree

upon; and that has got to be done by something which is either a new Memorandum or an amended Memorandum; I do not think it matters very much what you call it. Our experience in the House is that things may be amended out of recognition. I do not think this resolution matters very much; the third resolution is the important one. I do not think that by passing No. 2 this meeting does commit itself in any sense. All we do here is that first we recognise there was no bad faith in issuing Memoranda which have been issued, and we recognise that the Ministry has power to amend. I do not think that by asking the Ministry to amend the Memoranda we are doing any harm, and I do not think the meeting will be prejudicing itself in any way by passing this resolution.

Mr. LUCAS: Shall I be in order in suggesting that it reads: "That the Ministry of Health be requested to amend and re-draft the terms of the engagement of architects in connection with housing schemes, in conjunction with accredited members of the Royal Institute of British Architects"? It seems to me that this second resolution is of importance as showing we wish to open up fresh negotiations with the Ministry on this matter; and I think it is important that the Ministry should consult with architects engaged on housing schemes; and those architects should have, at their finger's end, certain figures to show the Ministry the tremendous loss that these abandoned schemes mean to architects. You have work in your office running on, perhaps, a couple or three years; and at the end you get a miserable pittance, not enough to pay your draughtsmen's expenses. And surely the error, if there has been one, has been that the various architects, or representatives of the Institute who have had this matter in hand, have not taken the trouble to work out a hypothetical scheme, to show what the loss is in any particular case. I therefore suggest that the resolution might read as I have drafted it, and the Ministry be asked to consult with accredited representatives of the Institute, and that these representatives should be armed with definite figures to put before the Ministry to show them the working of their various scales of fees.

The PRESIDENT: Do you suggest that as a substitution of No. 3?

Mr. LUCAS: Only No. 2.

The PRESIDENT: May we hear the text?

Mr. LUCAS: "That the Ministry of Health be requested to amend and re-draft the terms of the engagement of architects in connection with housing schemes, in conjunction with accredited representatives of the Royal Institute."

The PRESIDENT: Does anybody second that?

Mr. PERKS: I second that. It is rather wider than the original resolution, in which you hark back upon something which is very unjust in one of the earlier scales. I do not know whether Professor Adshead has any objection to this.

Professor ADSHEAD: I have no objection to this.

Mr. PERKS: I like it because it opens up negotiations about earlier Memoranda. There are some things very unfair in earlier Memoranda, some things which have just come to my knowledge.

Mr. ASHLEY: I think the second resolution is entirely covered by the resolution which Mr. Lucas has just suggested.

Major BARNES: How will it affect resolution No. 3 if that amendment is adopted?

The PRESIDENT: In my opinion, it poaches slightly on it, but does no harm.

Major BARNES: You would proceed with No. 3?

The PRESIDENT: If it is moved here, certainly.

Professor ADSHEAD: If it is the feeling of the general body, I accept it.

The PRESIDENT: I would point out, gentlemen, that that can easily be related to the next, No. 3, if that is passed, by a small change in the wording. I put the amended motion in the words Mr. Lucas read out: 19 votes in favour, 1 against.

Mr. CUBITT: You have not put it as a substantive resolution.

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The PRESIDENT : It is an altered resolution, but I will put it as a substantive motion.

There voted 19 in favour, none against.

Professor ADSHEAD : It appears to me now that, as the President has said, there may need some slight alteration in the third resolution. I will first read it as it is : " That for this purpose three members be appointed, with full powers to agree with the Ministry upon a scale for abandoned work within the limits prescribed by the Practice Standing Committee, in consultation with interested architects and upon matters referred to in the second resolution." It appeared to me there were one or two other points which we wished to raise. One was the question of travelling expenses ; another was a clearer definition of the meaning of the word " scheme." And the value of the last amendment is that it does give us a further opportunity of opening up these questions, which, although related to abandoned schemes, are related to the question of fees. So it would have to read something like this : " That for this purpose three members be appointed with full powers to agree with the Ministry upon a scale for abandoned work within the limits prescribed by the Practice Standing Committee"—I am reading what we proposed, but there is some alteration needed—" with powers to agree with the Ministry upon a scale for abandoned work and other matters."

Mr. PERKS : Leave that out. Say agree to a scale with the Ministry.

Professor ADSHEAD : But the whole point is a scale for abandoned work.

The PRESIDENT : I make a suggestion : " that three members be appointed with full powers to agree with the Ministry upon these points."

Mr. ASHLEY : This is putting in 4 and 31 with regard to work we are carrying out.

The PRESIDENT : But this meeting has put it in by passing the other.

Mr. ASHLEY : I do not think the meeting realises that.

The PRESIDENT : We cannot go back on that.

Professor ADSHEAD : I do not think, Mr. Ashley, we need read it in that hard light. It gave us an opening in the second resolution, and widened the basis of negotiation, and if you put it as the Chairman suggests, it will be all right. I would therefore put it in this way : " That for this purpose three members be appointed with full powers to agree with the Ministry upon a scale for abandoned work within the limits prescribed by the Practice Standing Committee in consultation with interested architects and upon matters referred to in the second resolution."

Mr. PERKS : I think that includes everything.

Professor ADSHEAD : In putting it in that form, I would like to point out that the Committee who drew up these resolutions drafted this one with the intention of securing in the most practical and in the safest possible manner the ideas of the general body of architects in regard to these terms. They felt that it was placing too much responsibility on one shoulder to send one delegate again ; and whilst they thought it wise to limit the deputation to three, in order to get quicker to the point, at the same time they felt they would like to limit the powers of those three, and let them go forward with plenary powers only from time to time from the Practice Committee. It was suggested at the meeting that the Practice Committee should be in full session on this matter while negotiations were going on, and that the Practice Committee should go into the matter much more fully than before, and possibly draw up scales which would meet every variety of circumstance, testing each one, in order to find out exactly how the new scale would meet the different contingencies. We realise that even then there may be outstanding circumstances in which it may be better to refer the matter direct to the Institute for consideration with the Ministry in particular cases. But we did want, as far as we could, to get a working scale.

The PRESIDENT : Will somebody second that ?

Mr. ASHLEY : I second it, Sir.

Mr. GUNTON : Before we vote, I would like to ask what will be the position of these members if we cannot agree ?

Professor ADSHEAD : The idea was that they take certain powers, and if they cannot get them through, they will have to come back for further instructions. They have power to agree within limits.

A MEMBER : By whom will they be appointed ?

The PRESIDENT : You have raised a very important point. It is absolutely essential, in my mind, that the general body should appoint them. I go the length of recommending them to do so to-night. It is not of the faintest good for them to say they come from the Practice Committee.

Mr. KENNARD : The question is whether it would be better for this meeting to tell the Ministry what they want in the way of fees, and see whether they can get it or not. Why negotiate ? Why not say what we want ?

Mr. Kennard, having made further suggestions with regard to the fees, moved an amendment.

The PRESIDENT : Will anybody second that ?

A MEMBER : I will second that.

A MEMBER : May I ask the Secretary to read a letter which has been received from Mr. F. W. Knight on the subject ?

The PRESIDENT : Certainly. I may say a very large number of letters have been received, and if the course of events had been what we thought, these letters would have been put into the hands of our delegates.

The SECRETARY read the letter.

The PRESIDENT : Since the amendment was moved, I have reflected on the matter, and I have decided that it is my duty to rule it out of order, for it cannot properly be said to be included in the notice convening this meeting, and it would not be fair to the general body of architects for us to settle terms at this meeting.

Mr. BURGESS : Speaking to the original motion, I think the most important thing in No. 3 resolution is the appointment of these three members. I think they ought to be appointed after the meeting between the Practice Committee and the interested architects. The interested architects should be notified by means of a public advertisement or other means, and a definite date for consultation with the Practice Committee appointed, and at that meeting these members should be appointed. Then the men who have stood to lose money will have had a good chance to show what they do stand to lose. Until that is thrashed out, it does not seem that anybody has sufficient knowledge to appoint three men and give them a definite limit.

A MEMBER : Some of us have come from the country to this meeting at some inconvenience, because we thought it was a special meeting to dispose of this subject, and I think it would be a pity to put it off again. It seems a pity to go on discussing this eternal problem all the time, and if we could appoint three delegates to-night, we should feel we had done valuable work, and that we need not worry about it further for a few months.

Major BARNES : What I understand this resolution will do, if it is passed, is this. It will put it into the hands of the Practice Committee to decide the limits within which these three delegates may settle. You say to the Practice Standing Committee, " You must consult with the interested architects " ; that is the first thing. After they have done that, they must fix the limits. I take it they will fix a maximum and a minimum ; that will give the three delegates play within those limits, within which they have power to settle. It does no more than that, and no less. Therefore it is not vital, I think, that the three delegates should be appointed to-night ; that does not follow naturally on this resolution. If we decide three shall be appointed, whether they are appointed to-night or on some later occasion is not material. What is material in this is, that we say that we have confidence in the Practice Standing Com-

mittee, after having consulted with interested architects, to fix certain limits. Before they do that, we shall have selected three men whom we have confidence in as negotiators, who will make the best of it within those limits. After what we have done in the first and second resolutions, this is consequential, and the actual appointment need not follow while we are discussing it.

Professor ADSHEAD : I would explain that it has been the common practice of the Institute to refer all their scales of charges to the Practice Standing Committee ; it is that Committee which is at home with all the scales, and it has been their particular province to deal with them. For that reason the Practice Committee was considered to be the proper body.

Mr. KENNARD : I still contend that as the Practice Committee disclaim responsibility and say " We did not negotiate these documents," it is clear that the Institute have made one deviation from what Professor Adshead claims is the practice. Therefore there can be no hardship if it is done again, and if the interested architects settle this. Personally, I am very little interested, but I know many men who are interested to the extent of thousands of pounds. I therefore feel this is a point which should not rest with the Practice Standing Committee, but with the interested architects.

A MEMBER : I second that, Sir.

The PRESIDENT : The case of the interested architects will, I think, be much stronger if they do not fight for their own hand, but if they allow the Practice Standing Committee to join them.

A MEMBER : There is a point in the original resolution which, I think, is rather dangerous, and that is the question of full powers to the Committee. I think it is unnecessary and inadvisable. I think I am correct in saying that the Surveyors' Institute did not give their Committee full powers, but referred the matter to the general body. I am against the amendment and against the original resolution.

Mr. CUBITT : I speak on the general question, because we are wandering a long way from where we started. Major Barnes said that we should appoint delegates to be directed by the Practice Committee to settle a scale for abandoned work. If you had passed resolutions 2 and 3 as they were on the paper that would be, but you have altered the whole thing by passing No. 2. Members may wish to do it, but I think many have done it without realising, perhaps, what they have done. Nos. 2 and 3 are linked together, and they have opened the whole question. Professor Adshead has tried to make No. 3 follow No. 2 by tacking on a piece at the end, which I do not think is a good piece of literary construction, because it is ambiguous. If we pass No. 3 as a supplement to No. 2, these three members will have power to vary the conditions of the engagement of architects ; they will have the power to do almost anything, and I do not think that was our intention. If we are going to pass it in the form which Professor Adshead read out, those three members will have power to alter the conditions and fix the scale, and vary the engagement of architects in any way they like, as long as the Practice Committee has not control. I am afraid I have raised more trouble, but that is what will happen.

Mr. ANSELL : We have the words " within limits " ; surely we have safeguarded ourselves ?

The PRESIDENT : Yes, I think you have.

Mr. KENNARD : I am sorry to trouble you again, but my amendment refers only to abandoned work, not to any other questions which may, or may not, be reopened.

The PRESIDENT : Yes, that is understood.

Mr. PERKS : How about the other part ? You must have three men of greater powers than that. In the Practice Committee you have a definite Committee of men to deal with. But if you have architects who are interested, from all over the country, you must advertise for them. You cannot get these men together, or men who know anything about it, at another meeting. I think the Practice Committee ought to deal with it. I do not know that they are anxious to do so. The Practice Committee before had nothing to do with it. But now the idea

is to have three gentlemen appointed who will be under the thumb of the Practice Committee.

Mr. PENFOLD : As one of the interested architects, I may say that if I have an opportunity of putting my case before the Practice Standing Committee, I shall have every confidence in them. (Hear, hear.)

The PRESIDENT : What I am putting to you is an amendment ; it is virtually the text of No. 3 as it stands on the paper, omitting the allusion to the Practice Standing Committee. So Professor Adshead's resolution is shorn of the added words we put in. I ask you to vote for or against 3 in that form.

4 voted for, 25 against.

It was therefore lost.

The PRESIDENT : I hope it is understood that I rule out that we settle the whole terms here. I now put the original motion of Mr. Adshead :

" That for this purpose three members be appointed, with full powers to agree with the Ministry upon a scale for abandoned work, and upon the matters referred to in the second resolution, within limits prescribed by the Practice Standing Committee in consultation with interested architects."

23 voted in favour, none against.

After further discussion with regard to the appointment of the delegates, the names of Mr. W. R. Davidge [F.], Mr. Herbert Welch [A.], Mr. Francis Jones [F.], Manchester, and other names having been suggested, the following Resolution was passed :—

" That the names suggested—namely, those of Messrs. W. R. Davidge, Herbert A. Welch, Francis Jones, Sydney Perks, Wm. Woodward, H. T. Buckland, and Courtenay Crickmer—be referred to the Practice Standing Committee, and that the Committee be requested to consider these names and others and to submit six names to a General Meeting of the Royal Institute with a view to the selection of three of them by ballot."

The proceedings then terminated.

Competitions

TOTTENHAM WAR MEMORIAL COMPETITION.

Members and Licentiates of the Royal Institute of British Architects must not take part in the above competition because the conditions are not in accordance with the published Regulations of the Royal Institute for Architectural Competitions.

BOROUGH OF HARROGATE WAR MEMORIAL.

The date of the above competition has been extended to 1 January 1922.

COMPETITIONS OPEN.

Harrogate War Memorial.

Paisley War Memorial.

Auckland War Memorial.

The conditions and other documents relating to the above competitions may be consulted in the Library.

WATFORD HOSPITAL COMPETITION.

The competition for the new Watford Hospital has just been decided, and Mr. W. A. Pite, F.R.I.B.A., the Assessor, has made his selection. The successful architect is Mr. Wallace Marchmont, *Licentiate*, R.I.B.A. The drawings submitted by the twelve competitors will be exhibited in the Galleries of the Royal Institute of British Architects from 29 December to 3 January inclusive, from 10 a.m. to 5 p.m. (Saturday, 10 a.m. to 1 p.m.).

Members' Column

OFFICE ACCOMMODATION.

Two Rooms to Let, first floor, Bloomsbury district.—Apply Box 301, c/o Secretary R.I.B.A., 9 Conduit Street, W.

CHANGE OF ADDRESS.

MR. ALAN L. BELCHER, Licentiate R.I.B.A., has removed from Grecian Chambers, Devereux Court, Strand, and is now practising from Craven House, Kingsway, W.C.2.

MR. WALTER MILLARD [F.] has changed his address from Deli View, Hitchin, to Fronwylla, Welshpool.

APPOINTMENTS WANTED.

SENIOR ASSISTANT, at present disengaged, seeks position in London Office. Good all-round previous experience in best London offices.—Apply Box 2811, c/o Secretary R.I.B.A., 9 Conduit Street, W.

LIC. R.I.B.A. (43), also Member R.I.P.H., prepares, or is willing to prepare, Quantities for new buildings or alterations to old; 27 years' experience. Terms on application to Box No. 222, c/o Secretary R.I.B.A., 9 Conduit Street, W.

ARCHITECT'S ASSISTANT, disengaged; Member of Institute; 20 years' experience; F.S. details of original ornament; perspectives in line, colour, or pastel; interior and exterior decorative work. Salary moderate.—Apply Box 2501, c/o Secretary R.I.B.A., 9 Conduit Street, W.

LICENTATE desires responsible permanent appointment. Many years' experience. Willing to accept work as Clerk of Works or Travelling Representative. Highest references.—Apply Box 592, c/o Secretary R.I.B.A., 9 Conduit Street, W.

A.R.I.B.A. (29) desires to purchase Junior Partnership in established London firm; 24 years' private practice, mostly buildings of the factory class. Good connection and prospects.—Write Box 2611, c/o Secretary R.I.B.A., 9 Conduit Street, London, W.1.

ASSOCIATE (38) having vast ambition, plenty of experience, much pride, a little money, recollections of his pre-war practice, also competition successes, wants job very badly.—Apply Box 7121, c/o Secretary R.I.B.A., 9 Conduit Street, London, W.1.

A.R.I.B.A. (29) desires appointment; all-round experience; accustomed to take charge of office and conduct correspondence; special knowledge and experience in town planning and estate development.—Box 5121, c/o Secretary R.I.B.A.

Minutes III

At a Special General Meeting summoned by the Council under By-Law 65, and held on Monday, 28 November 1921, at 8 p.m.—Present: Mr. Paul Waterhouse, *President*, in the Chair; 18 Fellows (including 6 members of the Council), 10 Associates, and 5 Licentiates.

The *President*, in accordance with notice, stated that the meeting had been summoned to consider the following Resolutions:—

1. That while re-affirming the objections to Memoranda Nos. 51 (D) and 52, which led to the Resolution of 4 July 1921, this Meeting recognises the *bona fides* of the Ministry in putting forward Memoranda Nos. 51 (D) and 52 under the impression that the R.I.B.A. had agreed thereto.

2. That the Ministry of Health be requested to amend the terms of the Memoranda in question.

3. That three members be appointed with full powers to agree with the Ministry upon a scale for abandoned work within limits prescribed by the Practice Standing Committee in consultation with interested architects.

The Resolutions were moved by Professor S. D. Adshead, *Vice-President*, and seconded by Mr. H. V. Ashley [F.].

After a long discussion—in which the following members took part: Major Harry Barnes, M.P. [F.], Josiah Gunton [F.], T. Alwyn Lloyd [F.], T. Geoffrey Lucas [F.], R. G. Muir [F.], Sydney Perks [F.], Percy B. Tubbs [F.], Maurice E. Webb [F.], W. H. Ansell [A.], Horace Cubitt [A.], J. M. Kennard [A.], Julian G. Burgess [Licen.], H. V. Ashley [F.], Professor S. D. Adshead [F.]—the Resolutions were carried in the following amended form:—

1. That while re-affirming the objections to Memoranda Nos. 51 (D) and 52, which led to the Resolution of 4 July 1921, this Meeting recognises the *bona fides* of the Ministry in putting forward Memoranda Nos. 51 (D) and 52 under the impression that the R.I.B.A. had agreed thereto.

2. That the Ministry of Health be requested to amend and re-draft the terms of the engagement of architects in connection with housing schemes in conjunction with accredited representatives of the Royal Institute.

3. That for this purpose three members be appointed with full powers to agree with the Ministry upon a scale for abandoned work and upon the matters referred to in the Second Resolution within limits prescribed by the Practice Standing Committee in consultation with interested architects.

4. That the names suggested—namely, those of Messrs. W. R. Davidge, Herbert A. Welch, Francis Jones, Sydney Perks, Wm. Woodward, H. T. Buckland, and Courtenay Crickmer—be referred to the Practice Standing Committee, and that the Committee be requested to consider these names and others and to submit six names to a General Meeting of the Royal Institute with a view to the selection of three of them by ballot.

The proceedings closed at 10.15 p.m.

Minutes IV

BUSINESS GENERAL MEETING.

At the Third General Meeting (Business) of the Session 1921-1922, held on Monday, 5 December 1921, at 8 p.m.—Present: Mr. T. R. Milburn [F.] in the Chair; 12 Fellows (including 5 members of Council), 10 Associates (including 1 member of Council).

The Minutes of the Meeting held on 21 November 1921, having been published in the *JOURNAL*, were taken as read and signed as correct.

The following candidates for membership were elected by show of hands:—

AS FELLOWS (15).

BARNISH: LEONARD [A. 1911], Birkenhead.
BEAUMONT: WILLIAM SOMERVILLE [A. 1905], Manchester.
BIDDULPH-PINCHARD: CHARLES HENRY [A. 1921].
BOND, ALEXANDER GODOLPHIN, B.A. Oxon. [A. 1897].
DAHL: JOHN LOVE SEATON [A. 1909], Folkestone.
DAUBNEY, CHARLES ARCHIBALD, F.S.I. [A. 1900].
DAVIDGE: WILLIAM ROBERT [A. 1904].
EVANS: CHARLES GLYNN [A. 1912], Neath.
GOURLAY, CHARLES, B.Sc., F.S.A.Scot. [A. 1887], Professor of Architecture, Glasgow.
HAMPTON: STANLEY HINGE [A. 1900].
RUSSELL: ROBERT TOR, D.S.O. [A. 1914], Delhi.
SIMPSON: GILBERT MURRAY [A. 1893], Brighton.
SULLIVAN: BASIL MARTIN [A. 1913], Lahore.
VINEY: JOHN NORMAN RANDALL [A. 1905].
WATKINS: WILLIAM GREGORY [A. 1893], Lincoln.

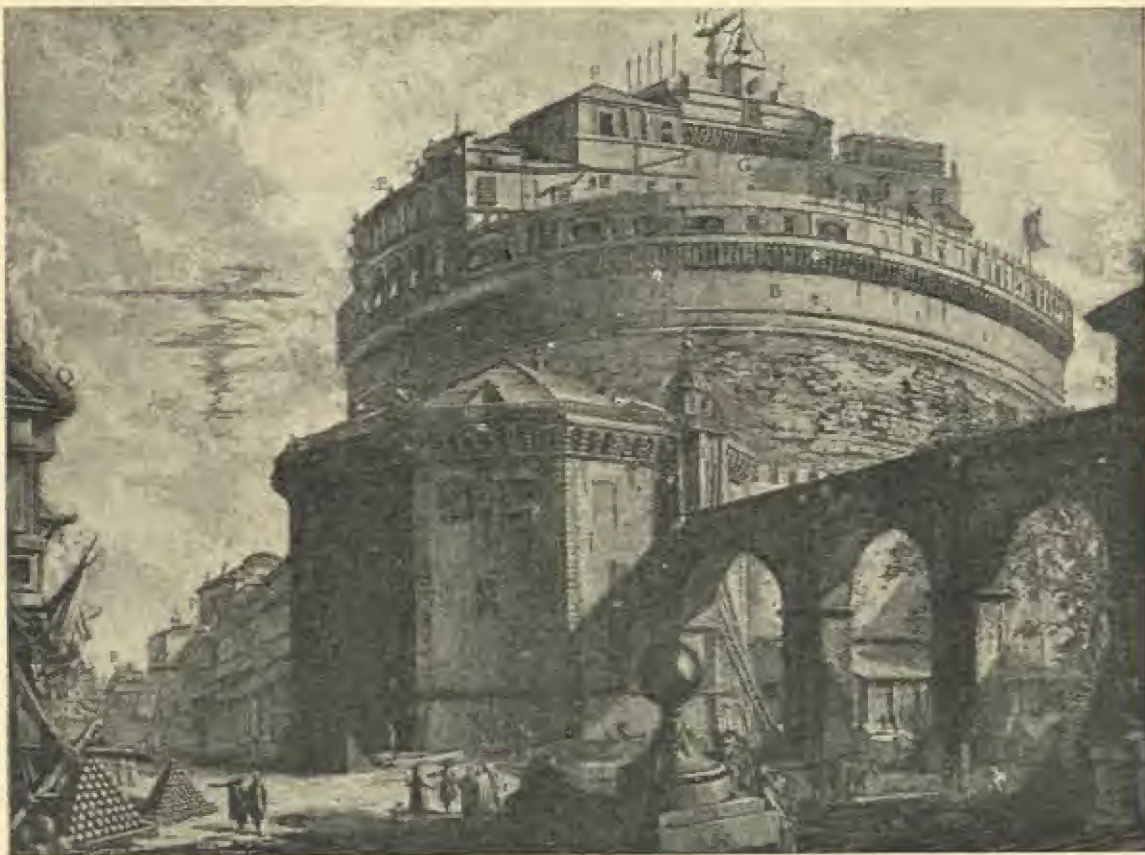
AS ASSOCIATES (112).

ADAMS: ERNEST HARRY [Special War Examination], Shanghai.
ARMSTRONG: EDWARD JOSEPH [Special War Examination], York.
ATKIN-BERRY: HENRY GORDON [Special War Examination].
AULD: ALEXANDER COSMO SMITH [Special War Examination].
BAILEY: CLARENCE HOWARD [Special War Examination], Westcliff-on-Sea.
BARBER: CECIL [Special War Examination], Leeds.
BARNETT: RICHARD REGINALD [Special War Examination].
BATEMAN: ROBERT WALLACE, M.C., B.A. [S. 1920—Special War Exemption], Manchester.
BATTY: JOHN [Special War Examination], Northfleet, Kent.

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- BATZER : ALBERT EDWARD [Special War Examination].
 BICKERTON : WALTER CRANE [Special War Examination],
 Castleford.
 BLACKETT : JOHNSON [Special War Examination], Port Sun-
 light.
 BLOMFIELD : AUSTIN, B.A. [Special War Examination].
 BOTTING : MILTON [Special War Examination].
 BOWES : TREVOR STRAKER [Special War Examination], Cardiff.
 BRIDGMAN : GERALD SOUDON [Special War Examination],
 Paignton.
 BROADBENT : GODFREY LIONEL [Special War Examination],
 Leeds.
 BROWN : KENNETH HENDERSON [Special War Examination],
 Aberdeen.
 BROWN : LEONARD JOHN [Special War Examination].
 BRYAN : GEORGE ALBERT [Special War Examination].
 BURGESS : HAYDN MERVYN RHYS [Special War Examination],
 Pontypridd.
 BUTLER : CECIL GEORGE [Special War Examination].
 BUTLIN : FREDERICK GEORGE MONTAGUE [Special War Exami-
 nation].
 CAMPBELL : JOHN, D.C.M., M.M. [Special War Examination],
 Manchester.
 CARTER : CHARLES SHIRLEY [Special War Examination].
 CHALLEN : HAROLD BERTRAM [Special War Examination].
 CHANNON : ERIC USHER [Special War Examination], Malton.
 CHARLTON : ERNEST STEWART [Special War Examination],
 Taffs Well.
 CHEERS : WILFROY ANSON [Special War Examination], Harro-
 gate.
 CHILD : FREDERICK AUSTIN [Special War Examination], North
 Shields.
 CLARK : ROBERT GIBSON [Special War Examination], Hudders-
 field.
 COLLINS : OWEN HYMAN [Special War Examination].
 COOKSEY : REGINALD ARTHUR [Special War Examination].
 CROSSMAN : CYRIL JOHN [Special War Examination].
 DARBYSHIRE : THOMAS SCHOFIELD [Special War Examination].
 DAVIES : IDRIS [Special War Examination], Nairobi.
 DAWBARN : GRAHAM RICHARDS, M.A. [Special War Examina-
 tion].
 DEAN : FRANCIS MOORHOUSE [Special War Examination].
 DONALD : JAMES [Special War Examination], Aberdeenshire.
 DRAKE : FRANCIS MILVERTON [Special War Examination],
 Cairo.
 DURAND : ARTHUR HENRY [Special War Examination].
 EASTON : JOHN MURRAY [Special War Examination].
 EBERLIN : ALBERT EDGAR, M.C. [Special War Examination],
 Nottingham.
 EPRILE : CECIL JACOB [Special War Examination].
 FAWCETT : GEORGE HERBERT [Special War Examination],
 Scarborough.
 FERGUSON : ROBERT WEMYSS [Final Examination], Edinbrough.
 FIREAR : ERNEST [Special War Examination], West Bridgford.
 FREW : JAMES ALLEN [Special War Examination], Kilsyth.
 GALE : GEORGE ALEX. [Special War Examination].
 GALLIE : CHARLES ROBERTSON [Special War Examination],
 Inverness.
 GIMSON : HUMPHREY MORLEY [S. 1921—Special War Exemp-
 tion], Leicester.
 GRESSWELL : HUGH [Special War Examination].
 HARMAN : GEORGE THOMAS [Special War Examination], St.
 Margarets-on-Thames.
 HARRIS : MORGAN RHYS HOWELL [Special War Examination],
 Neath.
 HARVEY : JOHN LYNE, M.C. [Special War Examination].
 HEDGES : WALTER FREDERICK [Special War Examination],
 Accra.
 HENDERSON : JAMES MURDOCH DALZIEL [Special Examination],
 Ayr.
 HEYSHAM : TERENCE ERNEST [Special War Examination].
 HILL : OLIVER [Special War Examination].
 HINWOOD : NEVILLE, M.M. [Special War Examination].
 HIRONS : PERCIVAL THEODORE [Special War Examination].
 HORTH : HAROLD EDWIN [Special War Examination], Hull.
 HUMPHRY : HAROLD WALTER [Special War Examination].
 HUNT : STANLEY [Special War Examination].
 HYDE : SIDNEY [Special War Examination].
 INGHAM : LAWRENCE WILLIAM [Final Examination], Co.
 Dublin.
 JACKSON : REGINALD [Special War Examination], York.
 JAMES : ALLEN COLLIER [Special War Examination], Buena-
 Aires.
 JOHNSON : FRANK LESLIE [Special War Examination].
 JONES : HAROLD [Special War Examination], Aylesbury.
 LAMB : HERBERT ARTHUR JOHN [Special War Examination].
 LECKENBY : CECIL [Special War Examination], York.
 LOGAN : JAMES, M.C. [Special War Examination], Newcastle-
 on-Tyne.
 MANN : WILLIAM RODERICK JOHN [Special War Examination],
 Sunderland.
 MASTER : CHIMANLAL MOTIRAM, M.A. [Final Examination],
 Bombay.
 MATHEWS : BENJAMIN KENNY OLLARD [Special War Exami-
 nation].
 MEALAND : HENRY ANTHONY [Special War Examination].
 MEIKLE : JOSEPH ABRAHAM [Special War Examination].
 MENDHAM : JOHN BENARD [Special War Examination].
 MITCHELL : GEORGE ANGUS [Special War Examination],
 Aberdeen.
 MURRAY : KEITH DAY PEARCE [Special War Examination].
 NEEDHAM : CHARLES WILLIAM CASHMORE [Special War Exami-
 nation], York.
 PALMER : JAMES [S. 1911—Special War Exemption].
 PICKFORD : LEONARD [Special War Examination].
 PINFOLD : STANLEY [Special War Examination].
 PLUMLEY : DONALD JOHN GRANT [Special Examination].
 PROSSER : DONALD SYDNEY [Special War Examination].
 QUICK : NORMAN DENNIS [Special War Examination].
 SHARP : FRANCIS GEORGE [Special War Examination].
 SKINNER : CEDRIC GEORGE [Special War Examination], Bristol.
 SMALL : WILLIAM [Special War Examination].
 SNELL : ALFRED [Special War Examination].
 SOUTAR : CHARLES GEDDES, F.S.A.Scot. [Special War Exami-
 nation], Dundee.
 STABLEFORD : CHARLES HENRY [Special War Examination].
 STOCKER : ALEXANDER [Special War Examination].
 STREETER : FREDERICK ROBERT [Special War Examination],
 Thorpe Bay.
 SUNDERLAND : CYRIL [Special War Examination], Halifax.
 SYKES : MARK NEVILLE [Special War Examination], Leeds.
 SYMONDS : JAMES BLAKENEY [Special War Examination].
 TAYLOR : WILLIAM JOHN [Special War Examination], Inver-
 ness.
 TELLERY : FRANK IGNATZ [Special Examination].
 TOWLE : CHARLES RAYMOND [Special War Examination].
 WHITE : RAYMOND CHARLES [Special War Examination],
 Aylesbury.
 WILKINSON : FRED, P.A.S.I. [Final Examination], Keighley.
 WILLIAMS : LEO JOHN [Special War Examination], Penance.
 WILLIAMSON : JOHN [Special Examination], Cardiff.
 WINCH : KENNETH MARK [Special War Examination].
 WISEMAN : ARTHUR ERIC [Special War Examination], Chelms-
 ford.
 YEATS : JOHN [Special War Examination], Aberdeen.
 YOUNG : CEDRIC JOHN MATHISON, M.C. [Special War Exami-
 nation], Perth.
 YOUNG : FREDERIC NEWALL [Special War Examination], Hong
 Kong.

The proceedings closed at 8.10 p.m.



THE CASTLE OF S. ANGELO, ROME. FROM PIRANESI

Giuliano da San Gallo and Antonio da San Gallo the Elder

By J. HUBERT WORTHINGTON, M.A. [A.]

THE following Paper is a *résumé* of two talks given to the Liverpool Architectural Society and the Liverpool School of Architecture. It makes no pretence to be an exhaustive statement of the subject, but perhaps its obvious incompleteness may suggest fields of study for others. There is too little method and too little co-ordination in the work of students going abroad; much time is wasted, and frequently little of value is added to the fund of common knowledge, whereas a small band of enthusiasts might record with completeness the works of some comparatively unknown man or

locality, if greater forethought and co-operation were exercised. In this instance information gleaned on a summer holiday at Montepulciano was supplemented by data obtained on previous visits to Italy. By limiting the objective new ground may be covered, and gaps in our knowledge filled, even when the time available is limited, but the value of such research must, however, depend largely on work done before and after such an expedition. Much remains to be done in the recording of the works of the Renaissance architects, particularly in the outlying towns: archives and

libraries should be explored, and careful measured drawings and full-size mouldings made of work attributed to certain men, so that by comparison with authentic work and the drawings of others a definite authorship may be proved. It is much to be hoped that the Architectural Association Sketchbook may shortly continue its former usefulness.

No phase of art can be really appreciated or criticised without a careful study of the age which produced it, and the searcher for hard facts must bear with digressions on the clients for whom the buildings were erected, and the life that was led in Cinquecento Italy.

GIULIANO GIAMBERTI DA SAN GALLO
[1445-1516]

Francesco di Paolo Giamberti was an architect who was much employed by Cosimo dei Medici. He came of an old Florentine family, but little is known of his work. Vasari tells us that he had two sons, Giuliano, born the year before Brunelleschi died, and Antonio, both of whom he apprenticed to Francione, a well-known Florentine joiner, for their architect father wished them to have a training in the building trade, and not, as had been customary, in the goldsmith's *bottega*, with craftsmanship, sculpture, and painting as the starting-point of artistic education. Giuliano soon proved himself a master in everything appertaining to woodwork, including intarsia and model-making, and he attracted the attention of Lorenzo dei Medici.

It happened that Il Magnifico wanted an ingenious person to take control of the defences of

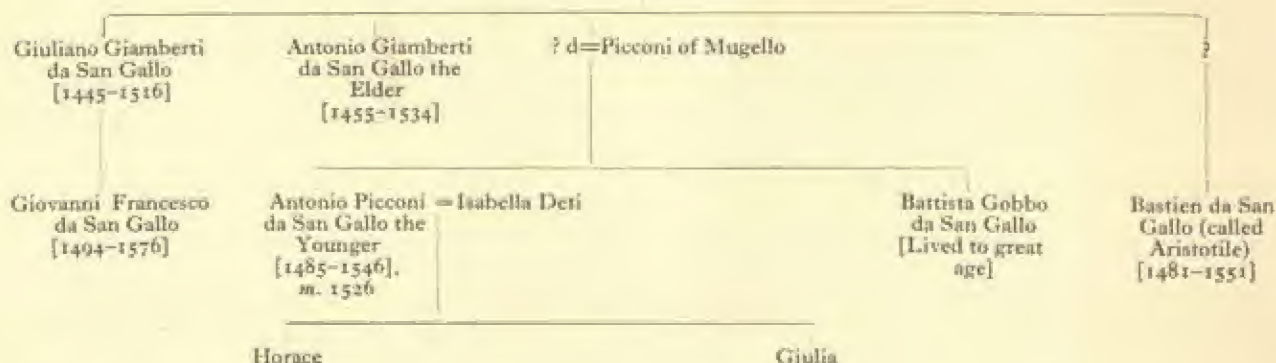
Castellina, which was threatened by the Duke of Calabria, and he sent the young Giuliano, for it must be remembered that the architects and artists of those days looked upon everything relating to military engineering as a natural and legitimate branch of their practice. The designing of a *fortezza* was as welcome an undertaking as the construction of a church, for in those happy days there was no hard-and-fast distinction between "architecture" and "building." The Peruzzi bastion at Siena ranks with his Casa Pollini as a work of art, and Leonardo da Vinci did not consider the laying of a water pipe beneath his dignity. The great Pozzo or well of S. Pancrazio which Antonio the Younger built at Orvieto was looked upon as a masterpiece of ingenuity and beauty, but in these days it would have been handed over to the borough engineer. Scene painting and street decorations, golden platters and inlaid viols, the removal of colossal statues and raising of antique obelisks, exercised the ingenuity and thought of the artistic "lions" of the Renaissance.

So the young Giuliano first came to the fore at the siege of Castellina, in the service of Lorenzo dei Medici. He put the town in a state of defence, and then turned his attention to the artillery, which he found in a parlous state. There were many accidents daily, the gunners were impotent through fear of their own weapons, and Giamberti assumed control, and brought that branch of the service into such a state of formidable efficiency that the army of the Duke came to terms and departed. Thus Giuliano won great favour with his illustrious patron.

Those of us who feel that our war service has

FAMILY TREE

Francesco di Paolo Giamberti



been a handicap to our careers as architects may gather consolation from the fact that the artists of the Cinquecento took their full share in the vicissitudes of active service, and that their art did not suffer. But they were pleasanter wars, rather in the nature of a pageant or a field-day, and, in comparison with the modern battle, casualties were ridiculously few,* and were in fact resented by both sides as rather ungentlemanly. Paolo Uccello in his pictures of the battles of S. Egidio† and Gualfonda has preserved for us, in his quaint and forceful style, the pageantry of Renaissance fighting, the gorgeous armour, the gay caparison of chargers, the decorative banners fluttering in the breeze.

Still, it was not all a glorious holiday. Giuliano was held a prisoner of war by the Pisans for six months, but not long after his release he got even with them by constructing a bridge of boats that cut off supplies from coming up the Arno, and caused capitulation. The Pisan prisoners were then forced to work on the great fortress of Poggio Imperiale, near Poggibonsi, which Giuliano began and Antonio completed for Lorenzo and the State of Florence. Giuliano also executed, at great speed, a fortress at the S. Marco gate at Pisa that was considered a masterpiece in the Doric style.

These facts will suffice to show that he was a man of action and resource. But little of his military work survives, and we must turn to his more strictly architectural performances.

His first building of note seems to have been the villa which Il Magnifico loved best of all his country houses, Poggio a Caiano,‡ which he won in competition in 1480, beating his old master Francione. It has a superb position between Florence and Prato, where the Pisan Apennines rise up from the plain, and commands beautiful views of the Tuscan mountains from the terrace which surrounds it.§ There is little distinction in its simple astylar façade, except for a graceful loggia with a fine della Robbia frieze surmounted by an over-heavy and rather meaningless applied pediment. The barrel ceiling of this loggia is very rich, and is the prototype of the vestibule to the sacristy

of Sto. Spirito in Florence. The great salone, 163 feet by 68 feet by 65 feet high, excited the utmost admiration, and was termed by Vasari "la più bella sala del mondo," and it was over the building of the ceiling of this hall that Giuliano showed his independent spirit. Lorenzo expressed anxiety about the span of the barrel vault which his architect proposed to throw over the salone; "but Giuliano," says Vasari, "who was building his



GIULIANO DA SAN GALLO*

own house in Florence at the time, vaulted his hall in this fashion to hearten Lorenzo." The fine external flight of steps was the work of Stefano d'Ugolino da Siena. This villa led to a number of commissions for Lorenzo, some of which were never finished owing to his death, and some of which have since been pulled down. Il Magnifico nicknamed Giuliano Giamberti "da San Gallo,"

* From block kindly lent by Technical Journals, Ltd.

* *Chronicles of Perugia*, 1492-1503. Matarazzo. Dent, 1905.

† In the National Gallery.

‡ Guy Lowell, *Smaller Italian Villas and Farmhouses*. New York, 1916. Plate 68.

§ *Florentine Villas*, Janet Ross. London, 1901.

after a building he was carrying out near the San Gallo gate at Florence.

An admirable form of diplomacy in those days was the sending of a favourite architect to some

gifts of money on the art ambassador, who refused them, with considerable dignity, and took back some fine antiques instead, which he presented to Lorenzo on his return. No wonder he got more



From a Drawing by Mr. A. G. Henderson
Reproduced from the *Architectural Association Sketchbook*, 1910

neighbouring prince, with a model of a palace. Giuliano's first mission of the sort was for Lorenzo to the Duke of Calabria at Naples, where his design met with such approval that the Duke showered

work. He was also sent to the Duke of Milan, when Leonardo was working at the court on the great equestrian statue that was so lamentably destroyed, and later he went for Cardinal della

Rovere to the King of France at Lyons, with yet another palace model. It would therefore appear that the architect of fashion and renown had a good time, being royally entertained, gaining a European reputation, and journeying up and down in luxury and comfort—a welcome change from the monotony of practice.

Giuliano's principal contribution to palace architecture was the Palazzo Gondi* at Florence, built about 1490 for Giuliano Gondi, a rich merchant whom he had met on his visit to Naples. It is of the same school as the Riccardi and Strozzi palaces; in fact, he is said to have had a share in the design of the latter, with Benedetto da Majano and Il Cronaca. The Gondi† is a rusticated astylar façade crowned by a cornicione, but it was never finished, as the elevation clearly shows. It has the customary cortile, with a rich and unusual open stair, and there is a fine anteroom and chimney-piece on the *piano nobile*. Altogether the Gondi is an average production of the period. Some attribute to him the authorship of the charming little Palazzo Antinori, also in his native city, though it is more generally supposed to be by Baccio d'Agnolo.

In Vasari's life of Baccio we read that his workshop was a favourite place for the artists of the day to assemble. "Here, especially in winter, remarkable discussions and important disputes took place. The principal figure at these reunions was Raphael, then a young man, and after him came Andrea Sansovino, Filippino, Majano, Cronaca, Antonio and Giuliano Sangalli, Granaccio, and, on rare occasions, Michelangelo, with many Florentine youths and foreigners." There was no lack of stimulating companionship. Giuliano sat as joint assessor with Leonardo, Michelangelo and Baccio d'Agnolo on the designs of the Great Hall of the Signoria at Florence, which was carried out by Il Cronaca.

The death of Lorenzo il Magnifico was a great blow to Giuliano, but he soon found plenty to do outside his native Florence. In 1494-7 he built the little church of Sta. Maria delle Carceri at Prato,‡ one of the most exquisite productions of ecclesiastical architecture of the first Florentine phase of Renaissance art. It is his most successful building, and the prototype of S. Biagio at Montepulciano, his brother Antonio's masterpiece. In plan it is a

Greek cross. Externally it is faced with marble and well-designed pilasters, and the dome does not show as such. Internally the expression is of the type of the Pazzi chapel, the old sacristy of S. Lorenzo, and the sacristy of Sto. Spirito,* which Giuliano built in collaboration with Il Cronaca. The dome is constructed with ribs, the four barrel vaults of the cross are coffered in octagons, and the frieze is by



SASSETTI TOMB, STA. TRINITA, FLORENCE

Andrea della Robbia. It possesses all the delicacy and lightness of the best buildings of its day.

From Prato Giuliano journeyed "with his masters, builders and stonecutters" to Loreto, for it was the custom of the architect to take his own trained men with him from job to job.†

Giuliano had a difficult task at Loreto, where he completed the famous Pilgrim Church of the Casa Santa, which Giuliano da Majano had begun, and which the younger Antonio afterwards decorated and repaired. He is said to have designed the cathedral at Cortona, which was rebuilt at a later date.

* *Architecture Toscane*. Montigny et Farnin. Paris, 1875. Plates 51-55.

† *Palast-Architektur-Toscana*. Raschdorff. Berlin, 1888. Plates 80, 81, 82.

‡ *A.A. Sketchbook*, 1909. Plate 56.

* *A.A. Sketchbook*, 1912. Plates 43, 45.

† *Durm V*, p. 417.

In Sta. Trinita at Florence he carried out the beautiful tombs in the Capella de' Sassetti, with the sarcophagus decorated with beasts' skulls like those on the tomb of S. Caccilia Metella, a fact which reminds us of his great reputation as an archæologist. The forecourt cloister of Sta. Maria Maddalena dei Pazzi, also at Florence, has capitals copied from an antique example found at Fiesole.*

Alexander VI, the Borgia Pope, commissioned Giuliano to put a new ceiling over the nave of the great basilica of Sta. Maria Maggiore in Rome [1493-8].† It was no easy task, for the span was 57 feet and the length 279 feet; but his training in a carpenter's shop stood Giuliano in good stead. It is a masterly production. Coupled principals, bolted together, span the nave at twelve-foot intervals, the trusses being combination king and queen posts, with the great lacunaria suspended from them. The ceiling consists of a simple repetition of rectangular coffers, in keeping with the rhythm of the long file of columns below, but it is as rich as applied ornament can make it, with the Borgia arms occasionally introduced as special points of interest. This superb ceiling should be seen at "Benediction" on Christmas Day, when the crowded basilica is a blaze of candles that illumine the ancient mosaics of the clerestory, and glint on the rich gilding of the ceiling ornament, against a foil of blue. The first gold from the newly discovered continent of America was used for this, being an offering to the Virgin from Ferdinand and Isabella of Spain. The ceilings of the Massimi and Farnese palaces should be compared with this *chef d'œuvre* of the carpenter's art, which Antonio da San Gallo, il Vecchio, is said to have carried out for his brother.

The rest of Giuliano's career is closely associated with Giuliano della Rovere, Cardinal of S. Pietro in Vincoli, who became Pope Julius II [1503-13], and lives for us in Raphael's portraits. San Gallo was blessed with illustrious clients, and Julius II was certainly one of the greatest figures of the Renaissance. Their long friendship began when della Rovere was Bishop of Ostia, where Giuliano built him the Castello [1483-6], and when the bishop became Cardinal about 1490, he began the palace and cloister of S. Pietro in Vincoli at Rome,‡ but, as the heraldic carving tells us, it was not finished

until his papacy. The work is completely Florentine in type; the great stone seat on which the delicate Ionic arcade rests gives a fine effect, and in the centre of the court is the famous well-head, the coupled Ionic columns and entablature of which Letarouilly ascribes to Giuliano, though the style more closely resembles that of the old Antonio. The actual cistern was added later by Antonio the younger, with carvings by Simone Mosca.

Giuliano devoted a considerable amount of time to the building of a palace at Savona [1493-7], on the Italian Riviera, Julius's birthplace. In the castle of S. Angelo he also built the charming little loggia of Pope Julius, in collaboration with Guglielmo da Piemonte, who was Michelangelo's model for his Moses. The slender Doric columns are 1 foot in diameter and 9 feet 6 inches high, with delicately profiled and enriched capitals; they should be contrasted with the heavier types in which the older and younger Antonios indulged.

The long association with Julius, and the close friendship that existed between them, naturally led to Giuliano being his confidential adviser in all art matters. He it was who suggested that Michelangelo should paint the Sistine ceiling, and that a new S. Peter's should be built; and it was the tragedy of Giuliano's life that, though the creation of the greatest church in Christendom was due to his imagination and initiative, it was to Bramante that the work was entrusted. It is not to be wondered at that Giuliano was deeply hurt, kissed the Papal toe, and left the Roman court, in high dudgeon, for his native Florence. But the whole question of S. Peter's is a subject in itself, and cannot be fully dealt with here. Suffice it to say that when Giuliano's turn came to make a plan it was in the form of a Latin cross,* which was possibly done in opposition to the Greek cross party, with a view to obtaining votes from the more conservative members of the Sacred College. The battle between the adherents of the Greek and Latin crosses waged for many years. Fra Giocondo, Raphael, and the young Antonio followed Giuliano's lead, but the unbiased critic must feel that Julius II and Bramante were right, although we must sympathise with Giuliano's injured feelings, after sharing the ups and downs of Julius's career. Giuliano has left a splendid model of his design,† which shows an interesting west front, with superimposed orders, and two great

* *Architecture Toscane*. Montigny et Famin. Plate 65.

† Letarouilly, Vol. III, plates 306, 310.

‡ Letarouilly, I, plates 140-142.

* *Saint-Pierre de Rome*. Geymüller. 1875. Plates 26-29.

† *Sturgis and Frothingham*, IV, fig. 664.

western campanili set in recesses, as was done later by Antonio at S. Biagio.

Giuliano Giamberti da San Gallo was a great man in his generation. In style his work follows naturally in the line of Brunelleschi and Michelozzo, and is in great contrast to the bold and rather heavy manner of his brother and his nephew Antonio. He is emphatically of the Early, as they are of the Middle, phase of Renaissance architecture. He is of the Florentine school, they are of the Roman. His detail is enriched by a sculptural touch, allied with Rossellino and the della Robbias, which finds no place in the later work of his brother. Renowned as an archaeologist and student of the antique, he has left innumerable drawings.* The beautiful home which he built for himself in Florence, and which he shared with his brother Antonio, was famous for its works of art and choice collection of antiques, and the great barrel-vaulted salone, which he built "to hearten" Il Magnifico, was a centre for the cultured life of his day, for he was intimate with the great men of his time. In character he was hot-tempered, warm-hearted and lovable, and much beloved by Antonio, with whom he appears to have worked in harmonious and generous accord. After an illness of two years he died in 1516, and was laid to rest in the tomb of the Giamberti in Sta. Maria Novella, leaving a son, Giovanni Francesco da San Gallo [1494-1576], who was trained as a sculptor, and helped the older Antonio and Andrea del Monte Sansovino in architecture, and is chiefly notable in that he carried out that most charming of small palazzi, the Pandolfini at Florence, from the designs of Raphael, between 1516 and 1520.

ANTONIO DA SAN GALLO IL VECCHIO [1455-1534]

Antonio da San Gallo was ten years younger than his brother Giuliano, and was called il Vecchio, or the elder, to distinguish him from his nephew Antonio da San Gallo [1485-1546], il Giovane, or the younger. His architect father apprenticed him to Francione, the same clever Florentine joiner to whom he had entrusted his elder son. The relations of the two brothers appear to have been of the happiest kind. For many years they shared the same house, and worked harmoniously together, the younger frequently making the wooden models for his more experienced brother. Models formed

a most important feature of architectural practice in Renaissance times, the utmost care and expense being lavished upon their preparation, and wisely so. All the dangers of delusive draughtsmanship were thus avoided; the design was thoroughly worked out in the round, critically studied from



ANTONIO DA SAN GALLO THE ELDER*

every point of view, and the client captivated by legitimate means. Original models of the period remain, and merit careful study.

Giuliano was well established in an excellent practice, and Antonio, if he was at first overshadowed by his brother's great reputation, had the advantage of being entrusted with the execution of many of Giuliano's designs, both in military engineering and architecture. He was essentially a practical man. It was whilst acting for his

* Biblioteca Comunale, Siena. Biblioteca dei Principi Barberini, Rome. Galleria degli Uffizi, Florence.

* From block kindly lent by Technical Journals, Ltd.

brother on the great wooden ceiling for the Basilica of Sta. Maria Maggiore in Rome that Antonio first came to the notice of Alexander VI, for the Borgias were shrewd judges of men, and Leonardo and Pinturicchio were in their employ. So it came about that Il Vecchio's first independent work of note was the remodelling of the Mole of Hadrian into the Castle of S. Angelo, as the Papal stronghold in Rome. The mausoleum that the Emperor had built for himself in A.D. 136, with the Pons Aelius leading up to it as an axial approach, was in form a great cylinder of pepperino and travertine 240 feet in diameter. Subsequently it became a bridgehead citadel, the key to the mastery of Rome, and it was connected with the Vatican by a covered passage, along which more than one Pontiff had hurried for safety. Pope Alexander commissioned Antonio to repair and decorate the dismantled fortress. As a piece of military engineering it was a *tour de force*, and brought the architect into high favour with the Borgias. To Il Vecchio are attributed* the great brick wall with machicolations which follows the lines of the circular drum of the original construction, the additional height giving room for the storage of siege rations of oil and grain, and for some of the famous dungeons where that engaging scoundrel Benvenuto composed his hymns and schemed his adventurous escape. The external enceinte was made impregnable by great ditches and a machicolated wall, with four towers about 75 feet in diameter, and a round tower defending the bridge, and beyond this outer wall all buildings were removed to give a clear field of fire. The Borgo Nuovo was formed connecting the citadel with S. Peter's, and the corridor leading to the Vatican was repaired. Except for the main mass of the drum, there is not much left to be seen of what must have been a most arduous and difficult piece of work, but it placed Antonio in the first rank of military engineers.

The castle of S. Angelo would be an admirable building for a student to "restore," as it was in Renaissance days. The charming loggia that Giuliano da San Gallo added for Pope Julius II, the superb Papal apartments and their decoration, the Pontiff's bathroom, and the lift that was made for Leo X when he became over-stout, give an intimate insight into the life of the Golden Age.

Not only did Antonio remodel the central stronghold of the Borgias, but he fortified many of their

important strategic towns. For Alexander VI he also built the citadel of Civita Castellana [1494-1500], which was enlarged subsequently by Julius II and Leo X. At Nepi he rebuilt the ruined castello, also for the Borgias, and Antonio il Giovane restored it later under Paul III. At Monte Fiascone he designed the *fortezza* for Duke Valentino, Cesare Borgia, just before the death of Pope Alexander in 1503, and Leo X restored it in after years.

Cesare Borgia must have been an exacting and alarming client, and the fact that Antonio served him for so long speaks volumes for the efficiency of his work. All the power of the Papacy was his, and he was backed by the King of France. His brilliance, his subtle perfidy and boldness, attracted a host of adventurous spirits to his standard, and those who stood in his way, including his own brother and brother-in-law, were inexorably disposed of. His ambition was boundless. He became his own condottiere, and in important cases murdered with his own hand, dispensing with the unsafe aid of a hired general or assassin. There were many of his kind amongst the despots of Renaissance Italy, but he surpassed them all. Indeed, Machiavelli says of him: "He therefore who finds it needful in his new authority to secure himself against foes, to acquire allies, to gain a point by force or fraud, could not discover an example more vigorous and blooming than of Cesare."*

It would be most unfair to Antonio to imagine him a rogue because he worked for such a man. Alberti was not judged less honourable because Malatesta was his patron, nor Leonardo for serving many workers of iniquity. Leonardo entered the service of the Borgias in 1502,† as military architect and engineer, and must have had close intercourse with Antonio. He inspected the fortifications of Umbria, of the Marches, and of Southern Tuscany, and suggested plans for strengthening their defences, and there is evidence that he visited Rimini, Urbino, Pesaro and Cesena in the same year. So Antonio was in good company. In those days the standard of life was different from ours, and villains of the deepest dye had a genuine and discriminating passion for the arts. Cesare was no exception, and the Pinturicchio work in the apartments Borgia in the Vatican is among the chief glories of Renaissance art.

* *The Prince*.

† *Leonardo da Vinci*. Rosenberg.

* Information kindly supplied by Dr. Ashby, British School.

There appears to have been no prejudice against either condottiere or artist for having served a deadly enemy. When Pope Alexander died, and the upstart Cesare fell from his ill-gotten power, the State of Florence took Antonio into favour, and he continued the building of Poggio Imperiale, in Giuliano's absence, with gangs of Pisan prisoners at his disposal. He designed the *fortezza* at Arezzo, and was appointed "Architect of the Town of Florence for all the fortifications" in the days when Piero Soderini was *gonfaloniere*. With his brother he superintended the construction of the bridge of boats across the Arno that forced the Pisans to capitulate, and, while Giuliano remained at Pisa completing the fortress, Vasari tells us that "Antonio went through all the territory, surveying and repairing fortresses and other public structures," up to the year 1512. So far Antonio was more engineer than architect.

Before passing to Montepulciano, the scene of his most important architectural work, mention must be made of the little triangle of central Italian towns—Monte Sansovino, Arezzo, and Cortona. These should claim the attention of some student. At Cortona the Palazzo Mancini* is attributed to him, and he made a model for a church which was never executed. Here too is the famous church of the Madonna del Calcinaio,† begun in 1485 by Francesco di Giorgio, and there can be no doubt that this fine domed and vaulted church greatly influenced Antonio in his design for S. Biagio. At Arezzo he built, besides the fortress, most of SS. Annunziata.‡ At Monte Sansovino the Palazzo Municipale [1520] is his, and he began a palace for Cardinal Antonio di Monte.

Montepulciano, described by John Addington Symonds§ as "the lordliest of Tuscan hill towns," stands on its rock, 2,000 feet above the sea,|| set in the fruitful valley of the Chiana. Its ancient walls, immense in height and strength, command a panorama of unrivalled beauty, embracing the lake of Trasymene, the distant Apennines and Monte Amiata. Fifteen miles to the north-east the lights of Cortona twinkle in the night-time, and Monte Sansovino lies at an equal distance to the north. It formed an excellent centre for a country practice,

and old Antonio must have enjoyed pleasant rides to his surrounding works.

It may seem strange that Il Vecchio chose to spend the years of his maturity in the seclusion of a small and somewhat isolated country town, after a youth spent in the stimulating environment of Florence in the brilliant days of Lorenzo il Magnifico and the subsequent period when he was a favourite of the Borgia court in Rome. But this latter experience would have given any one his fill of "life." Then, too, until advanced in years, his more brilliant elder brother must have outshone him. He was doubtless weary of the monotony of war work and the camp, and the endless journeyings up and down. But primarily the explanation lies in the fact that he had a passion for country pursuits and was devoted to agriculture, at which he excelled; and those who have been to the fruitful, teeming land round Montepulciano have felt the fascination of this farmer's paradise. Here country life is rooted in antiquity. Here is the classic simplicity and calm of Virgil's day. Great milk-white kine patiently turn the rich brown earth with primitive stake that serves for plough, or, scarlet-tasseled, drag with patient gait the scarlet carts laden with the vintage up the steep, dustless, stone-paved streets. The aged olives bear their fruit, orange-coloured pumpkins and yellow maize mellow in the sun. It is a land of plenty, rich in all the gifts of Mother Earth. Strong and amiable are the *contadini*, and fair and stately the Tuscan damsels in their gay headdresses of red and orange, yellow, blue and green. They are of the true lineage of Rome. The troops of bare-limbed children still charm us, as they charmed old Luca and Donatello, guzzling the luscious grape juice, for all the world like infant fauns. The wine is justly famous. The figs have a flavour delicate and soft as the caress of the mountain air.

Montepulciano seems to have enjoyed comparative peace during the years when old Antonio was so active in building there, but no Italian town was free from the internecine strife of party. From the twelfth century the republics of Florence and Siena had been in a state of intermittent struggle. One was Guelph, the other Ghibelline, commercial rivalry was bitter, and, above all, each was jealous to extend its territory, and Montepulciano was a perpetual source of contention. "Be mindful of Montepulciano, that, though it be of thy *contado*, most proudly endeavours to withdraw itself there-

* *Durm V*, fig. 148.

† *Sturgis and Frothingham*, Vol. IV, fig. 624.

‡ *Montigny et Famin*, plate 100, Moore, fig. 42.

§ *Sketches and Studies in Italy and Greece*, III.

|| *Architectural Review*, June 1921.

from." So reads the *Memoriale della Offese*, the blackbook of the Commune of Siena. The vexed question of Montepulciano opened again and again. Again and again she changed hands. In 1494, when Antonio was working for the Borgias, Montepulciano rose in insurrection and threw off the Florentine dominion, and so late as 1511 it changed hands and was restored to Florence. This meant exiles, and home was sweet to the exile, and vengeance a necessity to Latin blood. Many a private feud must have been settled here. One can conjure up visions of violence, wandering through this magic town at night, with its steep narrow streets and *vicoli*, the cliff-like majesty of walls and palaces, the mystery of shadow and of lamplight, beneath a canopy of stars. In that dim archway, perhaps, the soft-shod assassin, clad in eerie black with mask to match, silently smote his victim with damascened stiletto. When the blood ran red on those steep stone-paved streets it must have run indeed. There were stranglings and poisonings, too, for murder was a fine art, like all else, in those golden days of the Renaissance, and much was risked on the throw of a die, or for the love of a Tuscan maid, or for the dignity of office. What glint of moon or lamp on polished steel, what glimpses through the great windows of some *piano nobile* to the sumptuous revelling within, or through the humbler portières to the cheery company of the wineshops, with straw-girt, long-necked bottles gleaming with rich red Montepulciano wine!

Here, then, Antonio da San Gallo il Vecchio produced the works of his maturity. We know that he began the great church of S. Biagio and his adjoining house in 1518. Peruzzi came to work at the del Monte palace later, and Vignola, who enriched the town with several palaces, came, of course, later still. The fact that Il Vecchio worked for the municipality, for the leading prelate, for the great mass of pious citizens who subscribed for the erection of his masterpiece, would indicate that he was the artistic "lion" of the place. It is of interest to note that when he began S. Biagio at the age of 63, Giuliano had been dead two years, Bramante four. Leonardo was 66, Michelangelo 43, Peruzzi 37, Raphael 35, Sanmichele 34, and Antonio the Younger 33. Benvenuto Cellini, at 18, was setting out from Florence to try his fortune in Rome. This concentration of genius is hard to imagine, and the men they worked for were of an enlightened patronage almost unsurpassed. In

studying the San Gallo family we study the whole field of "the Age of the Despots."* Cosmo and Lorenzo dei Medici, the Borgias, Julius II, Leo X, Clement VII, Paul III, in turn all recognised the worth of this ingenious family of architects, and to understand their work one must also understand the history of Renaissance culture and Renaissance manners.

The palace which Antonio began for the old Cardinal di Monte has a place of honour in the great piazza that crowns the acropolis. It faces the old Palazzo del Municipio, with the Palazzo Nobili on another side of the square and the Duomo, with the simple campanile and unfinished façade, on the remaining side. The man for whom Antonio built this palace and one at Monte Sansovino must have been that Antonio Fabriani di Monte, Cardinal of San Prassede, who began the charming Vigne outside the Porta del Popolo at Rome. He died in 1533, and his nephew and heir also became Cardinal di Monte, and afterwards, in 1550, Pope Julius III, the builder of the famous Roman villa. The nephew had been chamberlain of Pope Julius II, and thus we see the link with the San Gallo family. On the corner of the building hangs the great oval shield carved with the Cardinal's coat-of-arms, suspended from a console and flanked by fluttering ribands, a treatment that adds greatly to the interest and individuality of the homes of the nobility. The main astylar façade has a robust and vigorous stateliness, in spite of certain crudities of detail. A seat of travertine, resting on bold console legs, gives a strong base to the building; the half-round of the seat returns along the side elevation as a torus mould, and wide "horse steps" spread out from the great rusticated door into the piazza. The two barred windows on either side of this central entrance are too big and too close to it, but this is atoned for by the splendid expanse of plain wall that gives such strength to the lower storey, an effect that is enhanced by the strong quoining. The five windows of the *piano nobile* are supported by heavy consoles, very coarse in detail, and revealing a tendency to overweight features that is characteristic of Il Vecchio.

The top storey shows the work of a more subtle hand. Windows fancifully crested, and with a flat console treatment on the sides, set in red brick, are undoubtedly by Baldassare Peruzzi, who finished

* J. A. Symonds, *Renaissance in Italy*.

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the building and designed the little cortile.* Peruzzi died three years only after the old Antonio, but we can assume that he took on the work when the latter retired to lead the life of a gentleman farmer in his old age.

The Palazzo del Monte is a typical town house of the Cinquecento, and conjures up visions of the life led by the Cardinal. One can picture the

To the right a wide and easy stair, barrel-vaulted, with cross-vaulted landing made unusually interesting by the clever introduction of an "Antonio Doric" column, leads to the grand salone on the main floor. Here we can picture the old prelate, while at the windows hang in summer heat great portières emblazoned with his arms.* What memories of bygone feastings one imagines here,



PALAZZO DEL MONTE, MONTEPULCIANO

brightly clad *bravos*, responsible for the protection of his person, lounging on the great stone seat, watching the gay life on the piazza, or gambling and swearing and drinking strong wine within the barred windows of their barrack-room or guard-house, waiting to be let loose on some intrigue or deed of violence for their unspiritual lord. From the blazing sunshine of the great piazza a cool vista down the wide central passage leads to Peruzzi's little cortile, charmingly paved in brick, with its pozzo and luscious greenery, and gracious shade beneath simple delicate arcades.

* *Architectural Review*, June 1921.

all that the rich productive countryside could boast: green figs, peaches, pears and pomegranates, set in choice vessels of pure gold! A tame ape wanders among the wine cups, picking delicacies; a splendid hound, with collar embossed with the del Monte arms, tastes his master's food for safety's sake, for "it belongs to the position of the great," says Matarazzo, "to keep horses, dogs, mules, falcons and other birds, court jesters, singers, and foreign animals." A handsome page in scarlet hose and gold-embroidered doublet tunelessly sings

* See contemporary portières from Palazzo Piccolomini in Museum at Pienza.

to his inlaid lute, and the far-famed vino nobile of Montepulciano lulls the senses to the long siesta. Surely the Cardinal chose well his country residence in this peaceful, prosperous, lordliest of Tuscan hill towns.

Antonio the Elder was, to all intents and purposes, a provincial architect. Except for the fortifications of the Castle of S. Angelo, he has left nothing of importance in Rome or Florence. This, combined with the natural influence of his military engineering work, and the rough nature of the material, fully accounts for the lack of refinement in his mouldings and detail. It is instructive to compare the buildings of these lesser towns of Italy with those designed by the same hand in the metropolis. Contrast, for instance, Peruzzi in the Palazzo Massimi at Rome with his provincial work in the del Monte palace at Montepulciano. In the latter we find the same subtle proportions, the same sense of style and scale; but mouldings are largely eliminated, and, when used, are greatly simplified, partly because of the rougher texture of the stone, partly as befitting a country work.

Opposite the del Monte (or Contucci) Palace is the Palazzo Comunale, the dominating building of the town, with its front facing the great piazza, its back clinging to the cliff of the acropolis. It is a provincial edition of the Palazzo del Publico at Florence, the sovereign city at the time of building. Here, in this abode of municipal government, many a scene of summary justice must have taken place—what hangings and quarterings, what hurlings of traitors from the machicolated parapet to be dashed to death upon the cobble-stones below—what gory heads set in a row on pikes against the clear blue sky—and in the dungeons prisoners languishing! The campanile still contains its rich-toned Cinquecento bell, embossed with religious subjects and pious inscriptions by some master hand. Near by, on the machicolated platform in the uncertain days of old, the watchman stood scanning the horizon. And when some cloud of dust arose and glinting armour flashed in the rich Chiana valley, the great bell would clang its angry summons to the citizens to arm, the gates were closed and barred, chains were stretched across the streets, and woe betide the man who tried to force his way into this mountain citadel, except by treachery and stealth.

Antonio remodelled the interior of the Palazzo Comunale in many ways. He had a hand in the great vaulted corridor, from one side of which a

little courtyard, now bricked up, once opened. Three arches resting on Doric columns, surmounted by a lighter arcade of four, are presumably his design, and on the other side is a Quattrocento twin arcade. The great easy stair must also be Antonio's, and closely resembles that of the del Monte palace opposite, but with a bold and effective console bracket in place of the Doric column on the landing, made for some rich candelabrum resplendent in gold and Cinquecento ornament. There is a little loggia, too, on the northern side, of the same period, where once, no doubt, the gonfaloniere rested after his official duties, enjoying the view towards Pienza and the Sienese contado.

Between the palaces of the Municipio and the Cardinal, and opposite the Duomo, stands a very remarkable and unusual building called the Palazzo de' Nobili or Tarugi.* Some say it is by Antonio, some by his nephew Francesco; but, whoever carried it out, the character of the work and forcefulness of design justify the supposition that Il Vecchio designed it. It is interesting as an example of a communal building and recalls our market halls, with its arcaded loggia open on two sides to the piazza. The building merits a careful analysis. It is a splendid and vigorous composition atrociously detailed and full of lapses in scholarship. The imposts of the arcades combine with the pedestals which support applied Ionic columns. These are conspicuous for their absence of proper bases and their coarsely detailed caps. This main order has no real entablature to carry, but is surmounted by the balustrade of the loggia of the top storey, a *motif* we also notice in the Canonica. It is lamentable that this top loggia, which recalls the Palazzo Guadagni at Florence, has been built up, for it is exceedingly rich and effective in design, coming beneath the shadow of the great eaves. The windows of the *piano nobile* are excessively top-heavy. The central bay, with its bold important door, has a wider spacing. When the detail of S. Biagio is compared, many similarities are to be noted.

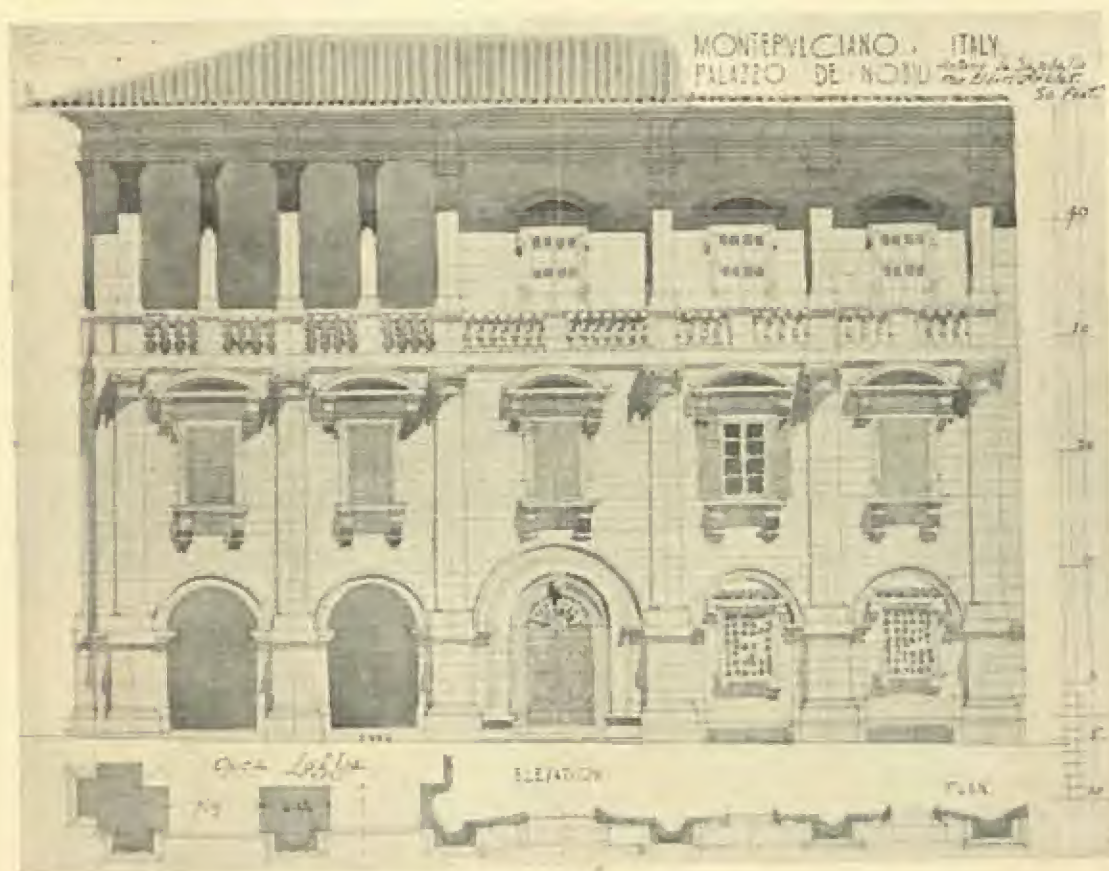
The great well-head, or pozzo, that stands in the corner of the Grand Piazza, beside the Palazzo de' Nobili, is presumably by Antonio il Vecchio. It is of traditional form, and should be compared with its prototype in the piazza at Pienza by Bernardo Rossellino. Pienza lies a few miles distant from Montepulciano, and is a complete expression of the

* *A.A. Sketchbook*, 1909. Plate 55.

earlier phase of Renaissance art. The little town sprang into being in three short years, at the will of Æneas Silvius Piccolomini on his elevation to the Papacy as Pius II in 1458. Rossellino, who worked with Alberti and whom he closely resembles in style, designed the whole civic centre. He was a sculptor-architect, and in the exquisite capitals and enriched entablature of the Pienza well-head we see the rich perfection of early Renaissance craftsman-

was trained in practical building and never attained to the mastery of craftsmanship and sculpture that came to the architects who began their training in the *bottega* of the goldsmith.

Before leaving these well-heads we must consider the famous pozzo in the cloisters of S. Pietro in Vincoli at Rome.* The coupled columns of grey granite and the entablature were built when Julius II was still Cardinal—that is, before 1503—



PALAZZO DE' NOBILI, MONTEPULCIANO
From a Drawing by Leslie Wilkinson

ship, stone carving and ornament, that is entirely absent in the old Antonio's work. In the massy grandeur of a bastion or the composition of a concentric church, Antonio excelled; but though we admire the bold contour of this basin and the other that he did outside S. Biagio, the wide spacing of the Doric columns and the almost childlike quaintness of the beasts that perch upon the cornice show us the limitation of his art. As has been said, Antonio

and as the cloisters were begun in 1490 by Giuliano, the architectural portion of the well-head may be by Giuliano, but the character of the mouldings justifies the assumption that Antonio il Vecchio executed it for his brother. The proportions resemble the Montepulciano pozzo. The actual cistern of marble was added later, probably in 1512, by the Cardinal Leonardo of S. Pietro in Vincoli in memory of his

* Letarouilly, I, 142.

benefactor, Julius II, which accounts for what at first appear as contradictions in the heraldry. Vasari, in his *Life of Simone Mosca*, specifically states that Antonio da San Gallo designed the actual basin. Mosca was Antonio the Younger's architectural carver; he discovered him as a youth and took him to Rome. Mosca was only 16 years of age in 1512, so it must either be a very early work or a later date should be ascribed to it.

There is a building of great interest ascribed by Burckhardt* to Antonio, though not mentioned by other authorities—the Palazzo Cervini in the Via Cavout. Here is a composition that has since become common, but which was almost unique as a *motif* for street architecture in its day—two projecting wings dominated by a central mass. The recess thus formed gives an importance to this building which it could not otherwise have possessed, for the street on which it stands is only twelve feet wide. The boldly projecting wings are admirably proportioned to the central mass, the graduated rustication being in courses alternately thick and thin, a manner cultivated by Antonio the Younger. The effect is most vigorous and straightforward.

To study the fullest expression of Antonio il Vecchio's art it is necessary to leave the town and its encircling walls, passing through the narrow Porta del Prato and down the steep, straight road, past stately cypresses and terraces of olive and of vine, to the grassy hillside plateau where the great church of the Madonna di S. Biagio stands, golden from the sunshine of 400 years. Around it nestles a little group of buildings, beautiful in texture, with an admixture of mellow stone, thin bricks of a rich red, and of sun-baked plaster, with doors of vivid green. Here are the clear-cut shadows made by loggie, and projecting eaves, and flights of external staircases.

The life of the little community of priest and peasants centres round the great pozzo of travertine, bold in contour and enriched with ironwork, where the handsome Philomela, superb of figure and bearing, draws the water in her copper amphora, whilst Fausto and his little friends revel in the sun and five great geese process around the church. On one side, where the road leads obliquely to the town above, is a little building with an arcade of stone Doric columns, surmounted by brick arches, now built up.

On the other side is the building which Antonio built in 1518 as his own residence. It is now the

Canonica. The façade which looks upon the church has a two-storeyed loggia of exceptional charm, and it is interesting to compare it with other buildings of its class. The arcades of the early Renaissance, such as the Badia Fiesolana* and the Gondi† palace, sprang direct from the columns. These light Tuscan arcades were gradually displaced by the "Colosseum system" of piers combined with columns or pilasters, as in the Palazzo di Venezia in Rome, and the type reached its perfection in Bramante's sacristy of Sta. Maria, near San Satiro, Milan, and his cloister of Sta. Maria della Pace at Rome [1504].‡ The proportions of the Pace cloister and Antonio's loggia are very similar, though the upper storey is treated in the former, arcuated in the latter. The Canonica forms a valuable contrast to its adjoining church, the simple rhythm of its small façade giving splendid scale to the massiveness of S. Biagio. The detail may have Antonio's somewhat robust carelessness, the scholarly perfection of the Bramantesque example may be lacking, but it defies all criticism when its massing and proportion are seen with the western sun gilding the warm stone and casting crisp arcade shadows against the white plaster of the wall behind. One can imagine the satisfaction to Antonio to dine in the coolness of the upper loggia watching the steady growth of his *chef-d'œuvre*.

Such is the setting of the Church of the Madonna di S. Biagio.§ It was built by public subscription

AERE VNDIQUE
CONFLVENTIVM
ERECTVM

on the site of an old church which contained a miracle-working image of the Madonna. Work was begun in 1518 and the lantern was completed in 1528. It follows in the line of Giuliano's church at Prato, the concentric plans for S. Peter's, and the church at Todi.|| In plan it is a Greek cross, broken on the exterior by an apsidal sacristy and two campanili (one unfinished) that stand, detached, in the western recesses of the transeptal arms.

It is unfortunate that the second tower is incomplete, for the effect of the two grouping with the dome is essential for the full realisation of the composition. Although actually detached, these towers form an integral part of the design, the orders of

* *A.A. Sketchbook*, 1913. Plate 55.

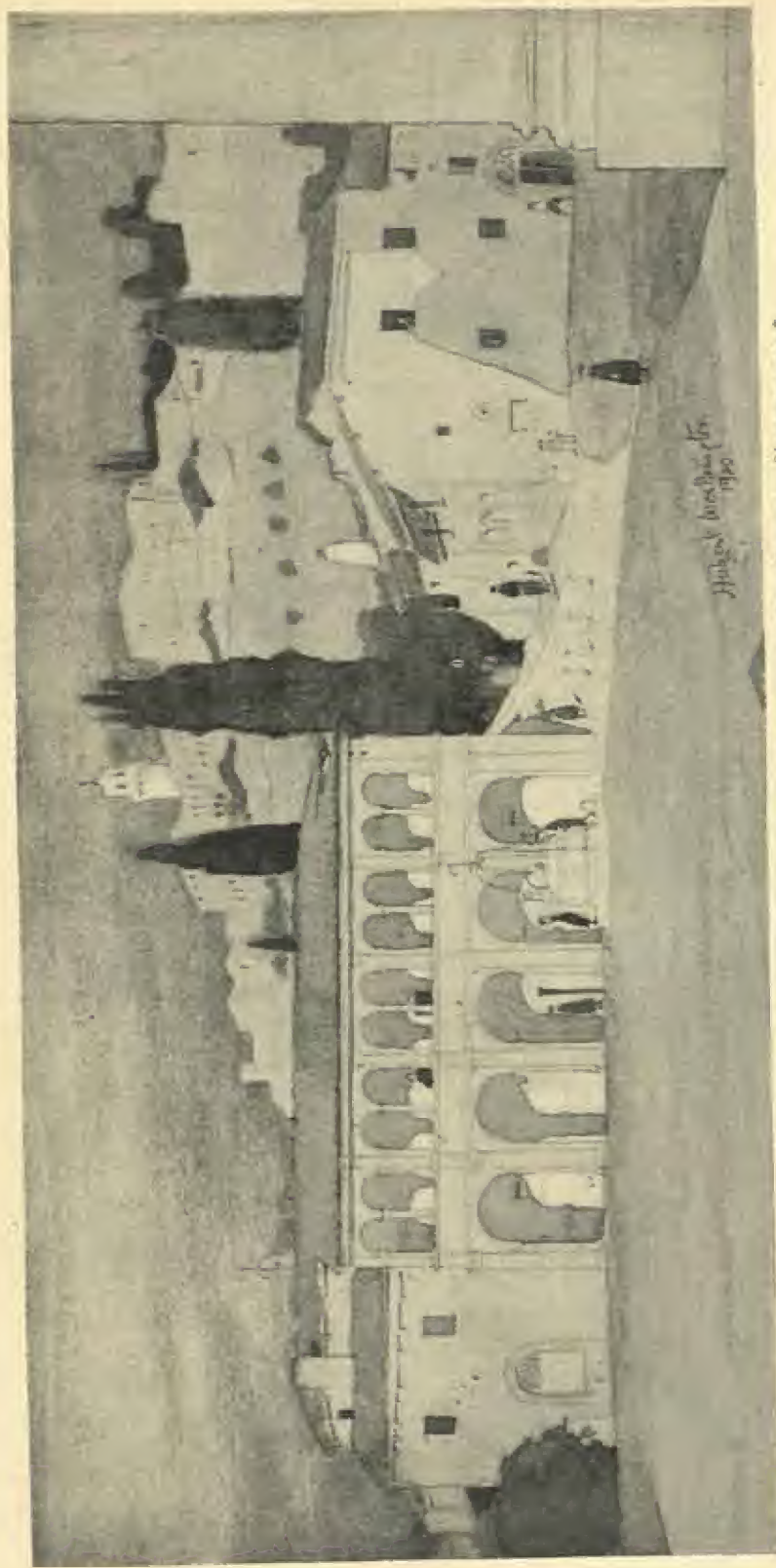
† *Palast-Architektur-Toscana*. J. C. Raschdorff. Berlin, 1888. Plate 81.

‡ *A.A. Sketchbook*, 1912. Plates 58-61.

§ *A.A. Sketchbook*, 1909. Plates 50-54.

|| *A.A. Sketchbook*, 1904. Plates 66-68.

* *Der Cicerone-Architektur*. Leipzig, 1910.



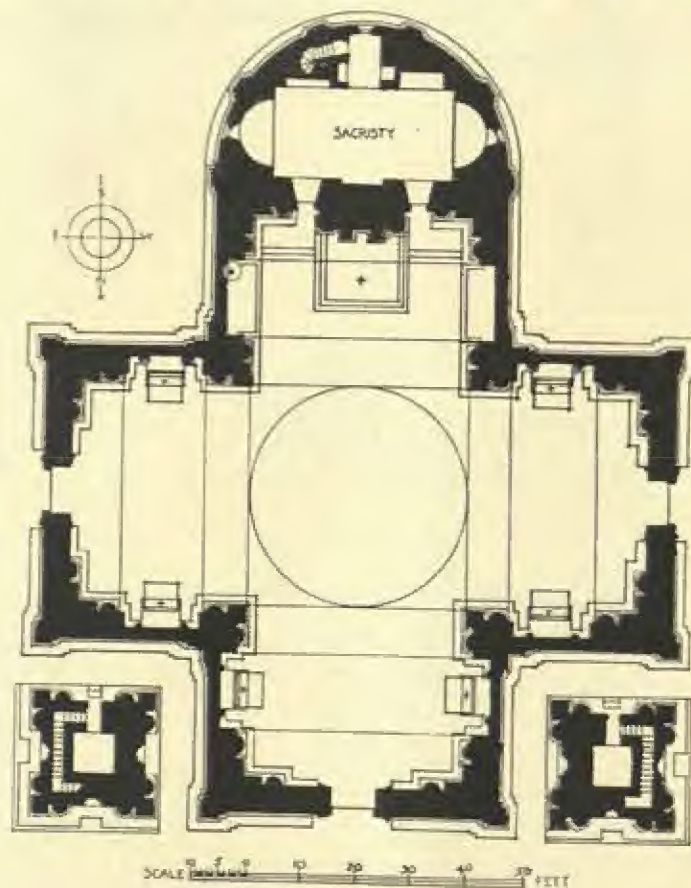
CANONICA OF S. BIAGIO, MONTEPULCIANO. ANTONIO DA SAN GALLO IL VECCHIO, 1518
(From a Water-colour Drawing)

the main church being embodied in them. Their detail is full of interest and variety, and the finished one is crowned by a low octagonal spire.

The type of plan causes the building to compose from every point of view. From east or west, north or south, from the hill above or the valley beneath, or from the simple podium of the terraced plateau,

S. Biagio they are rectangular and pedimented; and although the former was begun by Cola da Caprarola* in 1508, it was not finished until long after S. Biagio.

Apart from the concentricity of plan and simplicity of setting, the repose of Antonio's great church is largely due to the ample surfaces of un-



PLAN OF S. BIAGIO, MONTEPULCIANO

it rises from its great stone seat with a majestic harmony of soaring lines that culminate in the lantern of the dome. As Sturgis* has pointed out, the most successful exteriors of the Renaissance are those domical churches of concentric plan, such as S. Biagio and Sta. Maria della Consolazione at Todi, because in these designs the main façade or western front, of which most Renaissance architects made a failure, becomes relatively unimportant. At Todi all the arms are apsidal with semidomes; in

broken wall, made possible by the limits of the fenestration—which will be mentioned later—to the great entablature with triglyph and metope that binds the composition together, and to the dominating mass of the dome, which has now almost reached the full external development. No reproduction can convey the charm of the golden travertine, the softness of the shadows, the rich colour and texture of the roofs, the mellow copper of the dome.

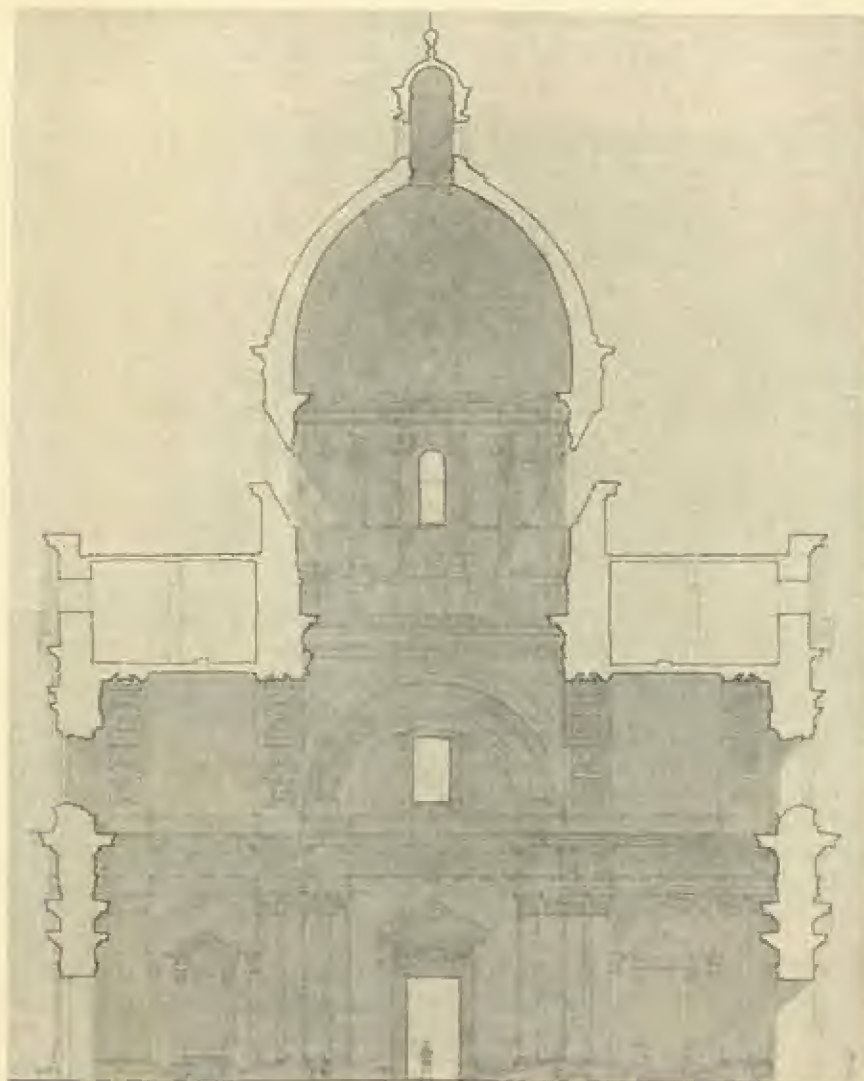
* Sturgis and Prothingham, Vol. IV. New York, 1915.

* Anderson. *Architecture of the Renaissance in Italy*. London, 1912.

If the exterior of the church at Todi may claim to equal S. Biagio, the interior of the latter is supreme of its type. It is, perhaps, the most perfect example of a Renaissance interior. It may be more like a Roman *tepidarium* than a Christian church,

part in stone of the free and noble spaciousness of "The School of Athens."

Its appeal is purely architectonic, and it relies hardly at all on the accessories and detail that often exercise a superficial charm when the underlying



S. BIAGIO, MONTEPULCIANO : SECTION

but in this it is a logical expression of the thought of its day. The supreme quality of the Greek cross plan is that the whole effect of overwhelming grandeur is straightway disclosed when once you push through one of the heavy padded doors. There is a boldness of conception, a larger unit of scale, a massive coherence, that make S. Biagio the counter-

principles of good design are absent. S. Biagio defies the customary criticisms of Renaissance haters. It is an organic piece of building, true within and without. There is no false façade, the walls throughout are travertine, the dome and vaults are solid brick. The elements of the design are simplicity itself, a stone seat running round as base, four shal-

low arms unbroken by aisles or recessed chapels, a heavy Doric order, the entablature of which, with its bold discs and triglyphs, gives the horizontal tie to the whole. The arches of the transepts, enriched with lacunaria, are raised on a small attic to counteract the projection of the cornice, and the deep-set windows fit well under the semicircular panel of the end wall—with one exception, doubtless the first one to be built. The composition is concentrated in the great central dome.

The effect of the interior depends largely on its lighting. There are four windows within the transeptal arches, four smaller ones in the drum of the dome, and the crowning lantern. Eight small windows in a church so vast form an interesting commentary on the clear atmosphere. Yet there is suffused light which reveals even the delicate soffit ornament of the cornice. At each successive hour the rays of light move round

And up into the airy dome where live
The angels, and a sunbeam's sure to lurk.

Analysis* of the proportions and details of S. Biagio shows the originality and independence of old Antonio's temperament. Here is a man caring only for the big effects. The rendering is Roman in its ponderous strength, as far removed from the slender grace and sculptural nicety of Giuliano's work in the earlier Tuscan phase of Renaissance art as it is from the considered refinement and scholarly perfection of his younger contemporary, Peruzzi. Il Vecchio ignores set rules and systems of proportion. If he handles the orders with a fearless freedom, the result, it must be admitted, is often clumsy. In the great Doric order the entablature is one-third the column height, the columns are 9 diameters high and the capitals a full diameter deep, yet of very slight overhang. The batter of the corona of the cornice is 2" in 9", and the upper fascia of the architrave is equally exaggerated. The only difference between the main exterior and interior orders is that in the former the metopes have square panels, in the latter discs, and the interior cornice has a light "Ionic" dentil course, and a soffit enrichment of unexpected delicacy, which is omitted in the exterior, where a simple ovolo is substituted.

As we have seen, the Doric columns of the main order are 9 diameters high, but it should also be noted that those of the small order to the side altars,

with their strangely detailed base and necking, are 7½, and those to the main window on the west front 11 diameters high. The Ionic pilasters of the exterior of the drum have no bases, nor have those of the second storey of the campanile. The Corinthian pilasters of the interior of the drum have "Tuscan" bases and simple uncarved caps, characteristic of the old, and the young, Antonio.

The main doorways are almost identical in treatment within and without. They possess a splendid simplicity and grand scale, with boldly moulded architraves, softened to the wall surface, and a frieze containing a very original and beautiful enrichment, but the tendency to top-heaviness is marked in the triangular pediments.

Other details of note are the intersection of the archivolts, and the lacunaria of the transept arches, the latter 4 feet 5 inches square and 1 foot deep, filled with bold and telling rosettes. The smaller arches of the transept arcades are similarly enriched and give valuable contrast in scale. The satisfying simplicity of the side altars, with their finely turned double-bellied balusters, and the cantorium with its gigantic consoles, are harmonious accessories. One laments the ill-assorted high altar and the organ and the ceiling decoration of the chancel arm, added in 1584 by Giovanozzo and Lisandro Albertini.

The jointing of the masonry is haphazard for a design so essentially symmetrical. There is no serious attempt to run the courses through, particularly round the doorways. The courses vary from 8 inches to 1 foot 8 inches in depth. The radiating joints round the arches over the side altars are extremely irregular, yet the mortar joints are fine. The stone itself is travertine, a whitish limestone rock, of fine grain but rather pitted, which has mellowed to a beautiful golden hue. The floor is paved with warm red brick, the windows are filled with old glass of a delicate green shade, except for the rich stained glass of the sanctuary window.

Finally, there is the sacristy, in itself a beautiful design, with walls and vaults of cool white plaster. It is a double square on plan, barrel-vaulted, with an apse at each end, lit by two small windows. Its ample Cinquecento cupboards, with their original locks and handles, contain rich vestments of Antonio's day.

Yet, in spite of certain crudities in detail which a close analysis may reveal, the general effect of this church is so satisfying that, just as in certain human

* Cf. Charles H. Moore, *Character of Renaissance Architecture*. New York, 1905.

beings smug perfection bores us and we prefer a man of character in spite of, or even because of, certain faults, so with the architecture of this most monumental building.

S. Biagio has style. It is the apotheosis of symmetry. Although not a large church—the 40-foot diameter of the dome being only 5 feet more than that of the little church of the Carceri at Prato—it conveys an impression of noble spaciousness unsur-

his Palazzo Massimi and Il Vecchio in his S. Biagio enjoyed the consummation of buildings supreme of their particular kind. In 1528 the lantern of S. Biagio was complete, and Antonio retired to enjoy his venerable age in peace and follow the life of a country gentleman and farmer. In those days of violence, when even the gentlest and most modest of architects is said to have died of poison, in a state of penury and want, it is pleasant to know that Il



INTERIOR OF S. BIAGIO

passed in any church of the Renaissance in Italy. It has scale. Its broad and ample proportions, its masterly lighting, the soft mellowness of the travertine, the warm red of the pavement, produce a classic calm. The spirit of old Rome lives in a fresh and vigorous renaissance. S. Biagio entitles its designer to rank with the highest artists of his great age.

Few Renaissance architects had the satisfaction of seeing their greatest work completed. Bramante and his successors on S. Peter's died with their dreams unrealised. The young Antonio's Farnese Palace was crowned by another hand. Cola never saw the lantern of his Todi dome. But Peruzzi in

Vecchio spent his last days in well-earned leisure and freedom from worldly cares, after a full and active life.

As a military engineer he deserves to rank with Michele Sanmichele and his own nephew and namesake. His architectural works are comparatively few, but, judging him by S. Biagio alone, he is entitled to a high place among the great Humanists.

It is well to bring to completion one great and noble work, and the analytical study of his masterpiece is one which will amply repay the student of Renaissance art. The work itself, and the man, and the times, claim our careful and critical attention.

We must not expect in him the refined perfection of Bramante or the versatility of a Leonardo. He could not boast Peruzzi's skill with brush or Michelangelo's with chisel. He was a plain, practical architect, trained for the trade, whose powers were concentrated on the art of building only. Herein lay his strength and his shortcomings. We modern followers of the Mistress Art may take no little comfort from this fact. None of us can aspire to the subtle scholarship, the superhuman skill of invention, or the many-sided brain of the giants of the Renaissance Age. The old Antonio was not a heaven-born genius: he was a simple, hardworking architect and military engineer, worried with the many purely utilitarian claims of practice, taking his share in disconcerting wars, yet living to complete his masterpiece in the fullness of years and end his days in quiet and honourable ease.

It was originally the intention to include all this great family of architects in this essay. But Antonio the Younger, and his hardworking brother Battista Gobbo, who, like Giuliano and Antonio the Elder, worked in partnership, demand a Paper to themselves.

There only remains Bastien da San Gallo, called Aristotile, another nephew of Giuliano. He was a pupil of Perugino's and was a prolific painter of Madonna and a scenic artist. But although he struck up a friendship with the young Raphael, he was a dull painter and an unconscionable bore, and earned his nickname from a passion for holding forth on perspective and anatomy on the slightest provocation. His only architectural performance of which we have knowledge was the setting up of a triumphal arch, in collaboration with Granacci, on one of Leo X's visits to Florence.



POPE ALEXANDER VI.
After the fresco by Pinturicchio in
the appartamenti Borgia.

Byzantine Architecture in Macedonia and Bulgaria

By ARTHUR WELFORD [A.]

In reading the article on "Byzantine Architecture and the Work of the Byzantine Research and Publication Fund" (12 November 1921), I was reminded of many interesting remains which I saw in Macedonia and Bulgaria during the war. As I have never seen any record of any one of these, it may be of interest to describe them briefly in the hope that they may not be forgotten.

(a) At the summit of Mount Kotos (4,000 feet), some fifteen kilos to the north-east of Salonika, the remains of the podium of a fair-sized temple, probably Ionic order. This mountain is reputed to have been one of the beacon-fire points used to warn troops for the Trojan wars.

(b) The keep of a Norman (Crusader) castle, very like a small edition of Rochester keep, situated on the Via Egnatia, one of the principal lines of communication of the Crusaders at Aivasil, on Lake Langaza, about twenty kilos from Salonika. Two grotesque heads, evidently stops from a Norman archivolt, are built into a Turkish archway in the village of Lajna close by.

(c) A series of five circular ponds (possibly Roman), supplied from a spring with hot sulphur water, about six kilos north of Langaza, at the foot of "St. Paul's Road."

I am told there are Roman baths still in use in Langaza, though I did not see them.

(d) Ruins of another castle, a day's march east of (b), on the shore of Lake Beshik. Remains of putlogs and putlog holes are in the walls; possibly this castle was being built when the Crusaders were forced out of this country by the Greeks.

(e) Between (d) and (f) an octagonal Byzantine domed bath of considerable size. I imagine the water is naturally hot; it is still in use by Greeks.

(f) A very large Turkish caravanserai (ruined), with a fine layout, including baths and mosque, at Pazarkia.

(g) At the west end of the Rendina gorge a very interesting little Renaissance chapel, rather reminiscent of Brunelleschi's Pazzi chapel in Florence. It was interesting to find that the Rendina gorge is locally known to this day as the "Valley of Death," owing to the fact that a band of Crusaders was wiped out here by Greeks.

(h) At Kavalla a magnificent Roman aqueduct of the triple arch type, very similar to the Pont du Gard at Nîmes, connecting the mainland with a sort of St. Michael's Mount.

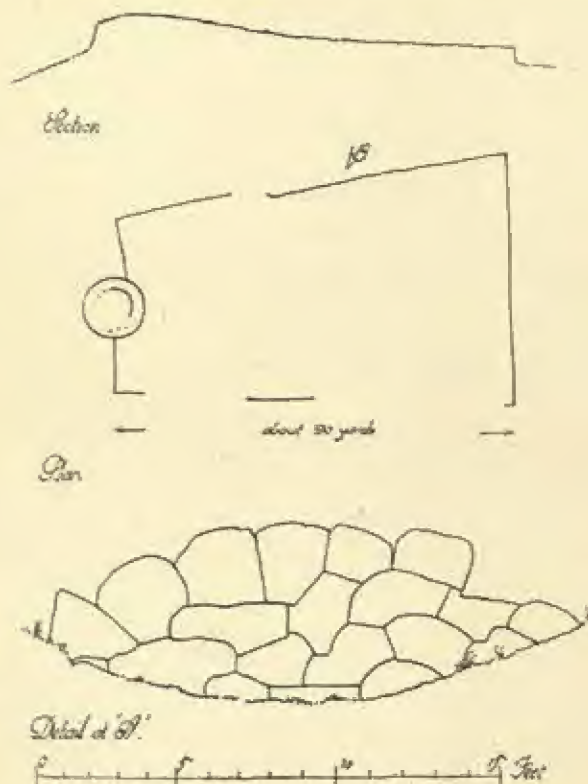
(i) Ruins of walls (probably Crusader) on the Via Egnatia, in South Bulgaria, between Xanthi and Gumulzjina.

(j) Along the Via Egnatia are many Greek well-heads, often sixteen-sided, and deeply scored by rope marks.

(k) At Ekaterinh, four miles from the coast, under Mount Olympus, a small Byzantine bath is still in use (and was used by our troops), consisting of the usual rooms varying from cold to hot. The sudorium is octagonal, lined with marble, and contains a hot-water pool.

(l) Scala Ekaterinh is connected to (k) by a perfectly straight Roman road, which runs for some four miles across marshes from Ekaterinh to the little port of that town, and is continued by a modern pier into the sea. The port consists of a few mean houses, planned on a square some 150 feet wide, with a perfectly preserved Roman altar in the centre of the square. This altar is of pink marble, about 4 feet square and 5 feet high; the base and cap are moulded and the sides decorated with swags. Three sides have allegorical figures, and the fourth has Alexander of Macedon mounted on a horse.

(m) Leaning against (l) is a Greek wall altar of a blue limestone, about 4 feet 6 inches high, with battering sides and an Egyptian type cornice. On the front is carved in low relief the figure of a girl lying on a couch. The inscription shows the altar to have been erected to the memory of a young girl by her father.



To my lasting regret, I have no drawings of any of these. Most of them were seen only in passing, and one could not even stop to examine them.

(u) At Katonia, near Bralo in Phocis, there are the remains of a Dorian settlement, of which I give some very hastily made details. This must be one of their earliest fortifications, as it is situated on the little plain near the mountain gorge through which the Dorians invaded the south.

(o) Delphi. This hardly needs description, as it has been well investigated and is now taken care of by a French mission. The Castalian spring still runs out of the rock, but the "weir" over which it falls into a bath is much broken down.

The podium of the Temple of Apollo is nearly perfect, except that part of the floor has fallen into the cave beneath.

The wall at the back of the colonnade of the Athenians is literally covered with Greek inscriptions, the letters being no more than $\frac{1}{2}$ inch high, with beautiful effect.

To see the bronze statue of the "Charioteer" and the "Dancing Girls" in marble amply repaid us for the many disappointments experienced in having to pass by so much of interest. In addition, we were rewarded for a hurried and toilsome climb of some hours up to Delphi by the sight of the full moon rising over the top of Parnassus, whose shadow was cast over the ruins and over the valley 2,000 feet below.

Students' Evening at the Exhibition of American Drawings

The Institute was happily inspired in arranging a special "students' evening" in connection with the Exhibition of American Drawings. Unfortunately many students were prevented from attending the previous exceedingly interesting addresses by Mr. Bertram G. Goodhue and Mr. Donn Barber, and it was therefore a considerate thought to have requested Mr. A. D. Miller, representing in London the Chicago firm of Graham, Anderson, Probst and White, to make a few remarks on the exhibition and the trend of present-day American architecture.

Mr. Austen Hall, whose acquaintance with modern American work allows him to speak with authority, presented Mr. Miller to the students and others present, and mentioned Messrs. Selfridges' new premises, for which Mr. Miller's firm are joint architects.

Mr. Miller, in his address, took his audience back to the early development of American architecture, which began only about 50 years ago. He traced the personal influence of men like Mr. Richardson, with the consequent development of Romanesque work, short-lived, however, owing to the lack of a really logical foundation

to this particular school of design. Mr. Miller then touched on the later development which had its origin in the influence of the Paris *École des Beaux-Arts*, from which brilliant students such as Mr. Hunt returned with the background of a solid training in planning, massing, and composition. Then, he explained, followed a reaction from the somewhat florid French elevational treatments to a purer and more restrained style, exemplified by the work of McKim, Mead, and White, architects who based their finest conceptions on Roman or later Italian Renaissance models. Mr. Miller mentioned the growth of Mr. McKim's personal talent, tending always towards a greater purity and the elimination of every unnecessary line or detail; McKim's favourite draughtsman's implement was said to be his india-rubber, and many designers to-day are learning to share his predilection.

Passing from an appreciation of McKim, Mead and White's work, in which Mr. Miller referred, as a personal preference, to the University Club in New York as perhaps the finest example, he spoke of the designs of other great American architects whose work was on view at the exhibition, stating that it was representative of the work of all the greatest architects, with perhaps only one notable absentee.

Mr. Miller gave an interesting glimpse of the internal working of a great American office, with its trained staffs detailing and co-ordinating every separate department of design and construction, including steelwork, elevators, plumbing, etc., so that the whole structure was completely designed in all its detail in the office itself.

After his address Mr. Miller and Mr. Austen Hall conducted parties of students round the Galleries, explaining in detail many points of American design which are unfamiliar to English architects, who face problems equally difficult, but of a different character. For the outstanding impression of the American work is of grand problems magnificently conceived and generously executed; while here in England there is a tendency to limit the architect in scale and scope, owing to both restrictions of cost and numerous building by-laws and regulations.

Special interest was awakened by such designs as those of Mr. Cass Gilbert's warehouses, Mr. Goodhue's San Diego Exhibition drawings, the rendering and photographs of Mr. Russell Pope's Temple of the Scottish Rite, and some of the domestic work, notably the wonderfully sympathetic Italian house on Long Island by Messrs. Walker and Gillette.

It is to be hoped that English students will realise the immense area and varied climate of the United States, directly responsible for a striking variety of character in design which could not legitimately be appropriate within the narrow latitudes of the British Isles.

HOWARD ROBERTSON, *Architecte Diplômé*,
Principal of the A.A. School of Architecture.

Correspondence

UNIFICATION AND REGISTRATION

45 New Bond Street, W.
13 December 1921.

To the Editor, JOURNAL R.I.B.A.,—

SIR,—In the vain hope of obtaining unification, a considerable section of the members of the Institute are anxious to take the momentous step of throwing open the doors of the Institute to "all architects of the United Kingdom" without test or examination.

This all-embracing policy of "unification" has met with the approval of the Council, and in due course the matter will come up for confirmation at a general meeting, when it is to be hoped the dire and far-reaching consequences of this sweeping-in policy may be seriously weighed.

Though we write in all sympathy with registration, we are not prepared to support this particular step towards its realisation, unless it can be demonstrated that there is some reasonable prospect of ultimate success.

It is true that Mr. Simpson has told us at the Liverpool Congress that "with unity must come registration"; but, with all respect to Mr. Simpson, this statement does not carry with it a sense of conviction, and, moreover, it is directly opposed to what Sir Reginald Blomfield and Sir Aston Webb have told us.

From the broad and political point of view it must be recognised that the tendency of the country is to become more and more democratic, and, as a consequence, the chance of any particular section of the community obtaining statutory privileges or protection becomes more and more remote.

In the past it was not by way of protecting the lawyers, the doctors and the dentists that they obtained statutory powers; these privileges were granted as a protection to the public. It will only be by architects demonstrating with overwhelming evidence that it is in the interest of the public that they also will have statutory powers granted to them.

We are almost ashamed to confess it, but we must admit the fact, that we have heard a very great deal about the benefit to architects, and, we are afraid, very little indeed about the benefit to the public, for, beyond the discounted statement of Mr. Simpson, there is nothing to encourage us to believe that the present movement of unification is likely to result in gaining statutory powers hereafter.

It is more than unfortunate—it is indeed misleading—to ask us to support unification now, as a step towards registration in the future. In fact, we are to be asked to pay for the goods before delivery, and the price is the ruin of the Institute.

If the principle of unification is to be adopted and maintained (and it seems useless to adopt it unless it is maintained) in the vain hope that registration will result, then the doors of the Institute must be left open for all architects to enter, without test or examination, until that vain hope has been realised. Then, and not till then, can the doors be shut again.

The great majority of the corporate members of the Institute gained admittance at considerable personal sacrifice and by examination. Also, and it will not be forgotten, that a pledge was given that after a certain date the ranks of the Licentiate should be closed. Are these sacrifices and this pledge to be scrapped? We cannot imagine that the majority of the members of the Institute will support the unification movement without some guarantee that their sacrifices will not be made in vain.—Yours faithfully,

GEORGE HUBBARD [F].
A. W. S. CROSS [F], Vice-President.

Guildhall, E.C.
13 December 1921.

To the Editor, JOURNAL R.I.B.A.,—

SIR,—I can assure Mr. Keen and his friends I give them all credit for the work they have done. I agree with him that "bringing all the architects of the United Kingdom into membership of the R.I.B.A." "means what it says." And Mr. Keen must not read in the word "qualified," which is not there. However, when the committee meets he can move a resolution to modify the previous decision.

Mr. Keen's contention is of the greatest value to those opposing the scheme; for let us accept the idea that certain qualifications would be necessary before admitting an architect to the R.I.B.A. This obviously implies that certain architects would be rejected and remain outside the Institute, as they do now. If Mr. Keen succeeds in carrying his views, he will kill the Unification Scheme; he cannot have it both ways—he must either agree to admit "all the architects" or drop the word "Unification."

Mr. Keen refers to the work of the committee; I am a member, and we did very little work. The sub-committee worked hard, and the committee did not take their valuable advice to accept the Dental Bill as "a valuable precedent" for architects. That Bill explains on the first page that dentists would be placed on the register *after* the passing of the Bill. The Americans have adopted this proper course in their "Model Form of Law for the Registration of Architects" (*Architects' Journal*, 19 October, page 465).

The idea of admitting members without a test, or with a test less severe than our Associates have to pass, would be grossly unfair. Some hundreds, probably thousands, of men might be admitted, and as members

they would be in exactly the same position with regard to the public as our Associates, and compete with them. It would not matter to the Fellows and older men of the Institute, who have established positions, but "the great sacrifice," admitted by the promoters of the scheme, would be borne by our Associates. Why should they do it? If the scheme were carried it would make no difference to me, but 30 years ago it would have made a great difference, for A.R.I.B.A. spells £ s. d. to the Associate; it is his stock-in-trade. I know that from experience, and I submit it is the duty of the older members to oppose any scheme likely to damage the position of the young men.

Just one other suggestion to Mr. Keen. An Institute does not increase "in authority and usefulness . . . and its reputation in the estimation of the public" according to the number of its members. The reverse seems the rule, and the most powerful societies are small, and with a limited membership.

SYDNEY PERKS [F.].

375 Union Street, Aberdeen.

5 December 1921.

To the Editor, JOURNAL R.I.B.A.,—

DEAR SIR,—I follow with much interest the correspondence on this subject which appears from time to time in the JOURNAL, and, like your other correspondents, I am jealous for the good name of the Institute.

It seems to me to be futile to attempt unification by any method short of absorbing the whole architectural profession of the country, and, like most provincial practitioners, I am all out for unification.

When I was a newly fledged Associate I was very touchy of this dignity being threatened by the absorption of any body of individuals who had not passed the requisite tests. But I have grown older since then, and, I hope, also more sane; and whenever unification arrives it is bound to affect temporarily the prestige of the whole profession. But it must affect somebody, and why not us and the men of our generation, if it is to do good to architecture as a whole in the years to come? A small sacrifice for the good of the cause would rather redound to our credit than otherwise.

In the meantime I make the suggestion that all Associates of any length of standing (say ten years) should be made Fellows, all Licentiates made Associates (with a test before promotion to Fellowship), and the rest of the profession segregated by their respective provincial affiliated societies into whichever class it seems appropriate to place them. There will always be men of varying degrees of capacity, and the Institute should provide for this by having at least three classes of membership for practising architects.

The experience of the Scottish Societies has been that it is better to have a man in the Society, even at

some risk to its prestige, rather than that the Society should refuse admission. Once a man is in, he gathers a certain *esprit de corps*, and, human nature being what it is, it is useless to hope to be able to certify all men as being of equal attainment. This should be frankly recognised, and due provision made for meeting the fact by the setting up of various grades of membership within the Institute.—Yours faithfully,

R. G. WILSON, JUN. [A.].

Exhibition of Drawings at Walker's Galleries

During the past month Mr. Hanslip Fletcher and Mr. Kenneth Hobson have held a conjoint exhibition of architectural drawings and landscapes comprising various media, the result of four months' work in Spain. Many architects have availed themselves of the opportunity to see the masterly drawings of these two men. The architectural impressions no less than the landscapes presented the scenery, both natural and conventional, in a way recalling the tradition of such masters as Varley, Cotman, Holland, Sandby, and others. Both artists believe in scholarship, and have aimed not at literal transcriptions of ordinary views, but have attempted structures in their designs combined with spirit and good taste. I would mention Mr. Fletcher's masterly drawing of Burgos Cathedral and Mr. Hobson's excellent monochromes of the Roman Aqueduct at Segoria as being among the best of the examples shown. Mr. Fletcher has brought to bear in his work his previous experiences of Continental travel extending over many years. Mr. Hobson possesses the fire of youth and, what is characteristic of all men of genius, a respect for the time-honoured works of the past. The recent exhibition was instructive from many angles. It was a revelation to find two artists drawing architecture and scenery as such subjects should be handled, free from mannerisms, tricks, and catches.

A. E. RICHARDSON [F.].

THE NATIONAL MEMORIAL TO HIS ROYAL HIGHNESS THE PRINCE CONSORT.

This large folio volume, presented to the Library by Mr. A. J. Burt, A.Inst.C.E., is a most exhaustive work on the Albert Memorial.

It was produced by the editor and publisher, Mr. John Murray, in 1873, and has chapters on the progress of the Memorial; an architectural description by Sir Gilbert Scott, R.A.—the architect—and contains illustrations of the mosaics, sculptures, statues, the statue of the Prince, and architectural plates, plans, elevations and sections by the architect.

W. P. S.

Addresses by Mr. Paul Waterhouse at Bristol and Manchester

The President of the Institute, Mr. Paul Waterhouse, attended, on 13 and 14 December, annual dinners of the Bristol Society of Architects and the Manchester Society of Architects. In each case there was a large gathering of members and guests.

BRISTOL

At Bristol, the President of the Bristol Society, Mr. G. C. Lawrence [A.], occupied the chair. Mr. Waterhouse, in the course of his speech, said:—

There was no feature of the view spread before him as a president more beautiful or more charming than the present friendly attitude of the non-Metropolitan architects towards their brethren in the Middlesex region. This attitude and the loyalty that went with it—a loyalty to the recognised and centralised organisation of the profession—was not a sentiment fanned into life now and again by the warmth of an occasion like that, but rather a steady, permanent, ever-increasing sense of brotherhood, of which such a meeting was not so much the stimulus as the outcome. One of the interests which had lately and very closely united Bristol with London was the vastly important one of architectural education. People were apt to forget that if local architects were the gainers by the advance of systematised architectural school training they were also the willing victims of a certain sacrifice. A generation ago all architects of position were able to make money, quite honest money, by taking pupils. In a wave, however, of enthusiasm towards better things practitioners all over the land had been willing, not only to forgo in greater or less degree that source both of income and of office assistance, but they had also gone the length of making further sacrifices of time and personal labour in order to aid and promote the work of schools started in their midst.

Bristol had witnessed a remarkable instance of the establishment of such a school, the opening of which had been attended, under Royal auspices, by his predecessor in office, Mr. Simpson, as well as by representatives of that other important body, the Architectural Association of London, to whose help in many practical details the successful launching of the venture was, at Bristol's invitation, very largely due. Mr. Waterhouse proceeded to speak of education in three aspects—its great value to the young men, who were trained on better lines than their forefathers; its value to the public, who thereby, when they required and paid for architecture, got better goods for their money; and, lastly, its value to the Institute of which he was President. With regard to the scheme known among them as uni-

fication, he explained that this did not mean that the profession was torn by heresy and schism. The question was a formal one—a problem of organisation. All he wanted to say about it was that it was not a scheme formulated by some individual enthusiasts in London, taken up by the Council of the Institute, and then pressed upon a half reluctant general body. As a matter of fact, this most excellent scheme was essentially a popular move—a move of the general community. The Unification Committee had been composed of architects in every grade, taken from the Institute, from the Society of Architects, and from outside bodies. Its deliberations had been of the freest, most outspoken, and most unprejudiced kind, and they had been followed by exhaustive inquiries among the allied societies of the Institute, inquiries which elicited spontaneous approval, not the least warm sometimes being from those classes of membership who would be called upon in the fulfilment of the schemes to make some sacrifice for their own and the general good. No reform ever lacked opposition. But he had been convinced in a remarkable degree of the unity of the profession's obvious wish on the subject.

He concluded on the subject of style. He said that in his opinion the question of originality in design was still largely misunderstood. People, he sometimes found, were ready to say: "I do not deny that reasonably original work can be done within the limits of the historic styles, but reason and art seem to indicate that still better work could be done if untrammelled by any considerations of tradition or archæology." It would be found that the acceptability among cultivated people of any design in architecture depended in all cases upon some sort of relationship to pre-existing design, and that consequently the new architecture, if destined to success, would owe its success to two conditions, both of which would probably seem a hardship to the pioneers of novelty. The first of these conditions was the lapse of sufficient time, say, 200 years, to make the proposed novelties back numbers—he used these words in a laudatory sense—and the second and hardest of all was a certain uniformity among the novelties. To adventurers, out for diversity at all costs, such a bondage would prove intolerable. The movement for a new architecture was being given apparently a fair trial in Amsterdam, where it would probably achieve a colossal failure, at the monetary expense of the Dutch, and would be to the artistic loss of Europe.

MANCHESTER

At the annual dinner of the Manchester Society of Architects, Mr. A. W. Hennings [F.], the President, occupied the chair, and amongst those present were the Rt. Hon. the Lord Mayor of Manchester, Sir Henry Miers, Vice-Chancellor of the University of Manchester, Dr. Percy Scott Worthington, and Mr. Francis Dodd.

JOURNAL OF THE ROYAL INSTITUTE OF BRITISH ARCHITECTS

In replying to the toast of the R.I.B.A. and Allied Societies, Mr. Waterhouse said :—

" I find that in the short space of time which would naturally be allotted to me as an after-dinner speaker I shall not be able to say all I should like, so I am going to ask you to grant me a few additional minutes. In responding in Manchester to the name of Waterhouse I am answering the acknowledgment of the city to a much greater man than myself—I mean my father, Mr. Alfred Waterhouse, R.A. Nor can I forget that it was this generous city of Manchester that gave him the opportunity to design two of the greatest buildings of the city. I refer to the little known Assize Courts and the well-known Town Hall.

" If the memory of the designer of those buildings lessens my sense of unworthiness in responding to the personal part of the toast, I have also to recall that, having a son of my own in actual practice and a member of the Council of the R.I.B.A., the name Waterhouse is in danger of being consecutively represented by those three generations which make up a century.

" But I am present to-night in a capacity other than personal. By the chances and changes which at times fit unexpected men into unexpected offices I am President of the Institute, one of the functions of which is to give greater reality to the brotherhood of the profession. I am proud and happy not only to be, for the time being, the formal head of that little republic of art, but to have been privileged to realise in the few months that have passed since my election the entirely informal warmth and bonds of good-fellowship which exist in all ranks of the organised profession.

" London cannot help being the centre of this perfect circle of perfect unity, and London is well aware—increasingly and progressively aware—of the fact that the curve of a steady circumference is as essential to a circle's well-being as that pin-prick of a centre which, being a mathematical point, has no parts and no magnitude.

" The subject which is very much in my mind, and in yours, is the scheme of unification. When one speaks in the hearing of strangers on this question we are in danger of conveying the impression that the body of architects is ' by schisms rent asunder.' As a fact, we are perfectly united, and most of our outside friends do not know what ' unification ' is. It is really a question of rearrangement. Let no one think that the unification scheme is the hobby of some London leader, pushed upon the Council in London, and then launched upon an astonished and uninterested general body. The genesis and the growth of this movement have been quite other than this. It has been born of a wise expectancy in many minds, and it was deliberated on by a committee formed of the most heterogeneous elements, drawn, in fact, from all classes of practitioners, both

within and without the confines of the Institute and the Society of Architects. Finally, it was brought to its present development by the exercise of generous and large-minded unselfishness among men all over the British Isles. If the movement has in any kind of sense been worked from London, then London has cause to be very grateful to the support of non-Metropolitan centres ; but, as a matter of fact, the movement was general, and the activities of London could fairly be described as London's doing its duty as fulcrum to a force at the business end of the lever. Not that any one ought to forget the heroic and tactful services of my friend and predecessor, Mr. Simpson, together with Sir Charles Ruthen and his colleagues of the Society of Architects.

" I should now like to say one or two words about education, and in this connection I would pay a warm and deserving tribute to Manchester's great and conspicuous share in the educational movement, and to the services which Professor Dickie has continuously rendered on the Board of Architectural Education. It is sometimes suggested that we are in danger, by means of the very excellence of our educational system, of overstocking the profession. It is suggested, too, that there are more persons already in the profession than can very well be supported by it. I feel we must with confidence leave this largely in the hands of the teachers of architecture, who, if they are convinced that there are young men in the schools who would be more likely to make a living in other spheres than in architecture, will, I am sure, in the future, as in the past, use a wise discretion in advising the removal of the unsuitable. Then, in connection with our schools, it is suggested we are in danger of becoming too academic. We have some very fine teachers in the schools, and we need have no fear, in my opinion, on that head. We have had in the past too little of the academic. All that is needed now is a caution lest the constructional side of the teaching loses its proper balance and proper connection with the compositional."

The Lord Mayor, in replying to the toast of the City of Manchester, referred to his work in regard to smoke abatement. He said that in these matters exceedingly valuable advice had been received from architects. There was no particular reason why Manchester should not be as attractive as Dusseldorf if proper steps were taken, and if we had the driving force in the community the absence of which Lord Newton deplored. Architects could help in this direction and, among other ways, by insisting upon the installation in houses and other buildings of smokeless heating apparatus.

Dr. Worthington spoke highly of the School of Architecture established at the Manchester University, which they felt, he said, was going to do great things in the future. Sir Henry Miers replied, acknowledging the toast.

Reviews

OLD LONDON ILLUSTRATED. *A series of drawings by the late H. W. Brewer illustrating London in the XVIth Century, with descriptive notes by Herbert A. Cox, F.C.A. Fo, Lond. 1921. 5s. net. [The "Builder" Office, 4 Catherine Street, Aldwych, W.C.2.]*

The *Builder* was happily inspired in publishing in convenient form the drawings contributed to its columns by that consummate draughtsman the late H. W. Brewer, illustrative of old London as it presented itself to his artistic imagination before the Great Fire of 1666. He did not, however, rely on his imagination only, but took immense trouble to get all the documentary evidence available of the position and character of the old buildings as they really existed. He has drawn for us a series of illustrations of old London which are well worth preserving, and enable us to form some idea of what an extraordinarily picturesque city it was, and of what we have lost by the destruction of the old priories and monastic buildings which not only adorned its streets, but provided ample open spaces which in the City we now sadly miss. It is sometimes difficult to follow Mr. Brewer in all his reproductions when comparing his sketches with some of the old plans of London, and some of the streets as he has drawn them certainly give the impression of being wider than they really were, but these are points of very small importance. Particularly interesting are the illustrations of the Bishop of Ely's Palace and Chapel and of Cheapside.

JOHN SLATER [F.].

EVERYDAY LIFE IN THE STONE AGE. *Written and illustrated by Marjorie and C. H. B. Quennell. Lond. 5s. [B. T. Batsford.]*

We have here a further contribution to the history of the everyday life of our ancestors, from the pen and pencil of Mr. and Mrs. Quennell, and on this occasion we are told what is known about the life of the human race as far back as twenty-six thousand years B.C.

Such far ages border upon the infinite, and it is difficult for the ordinary mind to realise the significance of such vast stretches of time, but as "history is not just dates, but a long tale of man's life, labour and achievement," and as the book deals with man from this standpoint, the overwhelming weight of time is lost, and we can visualise prehistoric man in his wild surroundings and enter, in some measure, into his life, which is a long story of his struggle to overcome the inevitable troubles which beset life on this earth and the endeavour to make it possible to live with some reasonable comfort and security.

The first chapter deals with and elucidates the method in which the earth's surface was formed, where the remains of prehistoric man are found; slight these

may be and scanty, but they are sufficient on which to base a story of his life.

Each succeeding chapter deals in chronological order with man and his development, traced, for the most part, from the remains of the animals of his period, as well as his implements, for we read: "The lower animals in kindly fashion seemed to arrange that their bodies might sink in the water, settle in the mud, and become beautiful fossils." Not so the restless individual man, who died in the open, and whose bones are lost; but, in spite of this, his skull has been found, and we are told that even in these remote ages "the brain pan of *Pithecanthropus* exceeds that of any ape and equals about two-thirds that of modern man."

Flint implements play an important and, indeed, an essential part in the life of prehistoric man. Necessity made him a hero, for, with his spear tipped with a sharpened flint, he went forth and with his superior cunning faced far more formidable wild beasts than any that now exist. We are told about the sabre-toothed tiger, the mammoth, and many more, most undesirable for near neighbours, and life must indeed have been a precarious affair then. Thus it is that flint implements are all important in the light they throw on his life and progress. Flint work of all kinds advanced in beauty of finish as man advanced, and after being fashioned into various shapes was in the earlier times almost the only material employed for instruments in use for domestic and hunting purposes.

Prehistoric man was a sensible fellow, sticking to tradition in the implements he made. "The design of these was a continued growth, and prehistoric man did not in any one year leave off making Chellean types and introduce a new Acheulean fashion." New art was unknown then, but later on he "made his spear and arrow heads in ivory and reindeer horn," and this marks a further step in the upward grade.

First of all their homes were mere lairs, such as the wild beasts use; then shelters from the winds, and, later on, primitive huts. But it is to the period of the cave-dwellers we must turn for real inspiration in art, as it is then "that the Magdalenian period marked the highest development of the art of prehistoric man. The paintings are of astonishing merit; without being great sticklers for detail, these old painters caught the very spirit of the animals they painted." The cave would seem to be a great advance in his comfort, and to supply his æsthetic desires to the fullest extent.

One more human touch comes in to link the past up with the present. This we owe to man's ever-faithful friend and companion, the dog. Prehistoric man found out what a self-sacrificing and devoted friend he was, and adopted him for an ally; and as we look far back, along this vista, we can see man and his dog in close companionship, until our vision can no longer pierce the gloom.

This book is written primarily for the young, and the writing and illustrations work together in producing a living picture of the time which should prove attractive not only to the young but to grown-up children as well.

HORACE FIELD [F.].

Letters and Drawings of John Webb

Some extremely interesting drawings and letters of John Webb have recently been entrusted to the care of the Institute by Sir Vere Isham, Bart., of Lamport Hall, Northamptonshire. These may be seen on application to the Librarian. Mr. J. A. Gotch [F.], having occasion to write a short history of Lamport Hall, remembered that the county historian, Bridges, in writing (about 1720) of the parish of Lamport, mentioned the enlargement of the Hall by Webb, adding that certain drawings and letters of the architect were preserved there. Mr. Gotch accordingly made enquiries of Sir Vere Isham as to the possibility of the drawings having survived, and was courteously invited to help in the search for them. The search proved successful, and the drawings were lent to him, with the result that a full description of them, together with a transcript of the letters, was published in the R.I.B.A. JOURNAL of 24 September 1921. It then became a question of how best to dispose of the drawings without again troubling the present tenants of the Hall, and eventually Sir Vere most kindly agreed to place them in the custody of the Institute, on condition that they should be returned when asked for, as his son is greatly interested in architecture.

Lectures on Historical Building Construction

A novel course of lectures is to be given at University College, London, during the coming term, by Mr. Martin S. Briggs, F.R.I.B.A. (Godwin Bursar, 1914), on "The Historical Development of Building Construction." This course constitutes the first attempt to trace the various elemental processes of building through the different ages. It is intended for those who already possess a knowledge of building construction and of the history of architectural development, but whereas history and construction have hitherto been taught as separate subjects, the lecturer will prove their mutual interdependence from the days of the ancient civilisations down to modern times. Attention will be given to minor points of exceptional interest in which the problems of the old builders may be compared with our own. The subjects of the ten lectures will be: 1, Brickwork; 2, Masonry; 3, Concrete and Marble; 4, Carpentry; 5, Joinery; 6, Ironwork; 7, Roofing; 8, Plasterwork; 9, Leadwork; 10, Glazing. Full particulars of the course can be obtained from the Secretary University College, London (Gower Street, W.C.1).

The Library

NOTES BY MEMBERS OF THE LITERATURE COMMITTEE ON RECENT ACQUISITIONS.

[These Notes are published without prejudice to a further and more detailed criticism.]

SOME CAIRO MOSQUES AND THEIR FOUNDERS. By Mrs. R. L. Devonshire. 80, Lond. 1921. 178. 6d. [Messrs. Constable Company, Ltd., London.]

This is a small book of about 120 pages, written for ordinary readers, not for specialists. It contains about thirty excellent photographs, chiefly of subjects not illustrated before.

A. H. M.

THEATRES AND CONCERT HALLS. Portfolio of plates. Lond. 1921. 15s. [Messrs. B. T. Batsford, Ltd., 94 High Holborn, W.C.1.]

This folio of plates consists of reprints from "Academy Architecture," and should be of considerable interest. The subjects are chosen from English, American and Continental sources, and the illustrations, which number about a hundred, include some admirable reproductions of plans.

A. T. E.

ENGLISH HOMES. Period V.—Vol. I. Early Georgian, 1714–1760. By H. Avray Tipping, M.A., F.S.A. Fo. Lond. 1921. £3 3s. [Country Life Offices, Tavistock Street, Covent Garden, W.C.2.]

This volume continues the series of fine books by this author. The period covered is Early Georgian, from 1714 to 1760, and includes such well-known examples as Chiswick House, Houghton Hall, Moor Park and Rainham.

The high standard of the previous volumes is maintained.

H. A. H.

ARCHITEKTUR UND KUNSTGEWERBE IN ALT-SPANIEN. Fo. München, 1920. 15s. [J. Tiranti and Co., 13 Maple Street, Tottenham Court Road.]

An admirable collection of photographs, well reproduced, illustrating architecture and crafts in Spain from the Middle Ages to the eighteenth century. The volume includes a variety of examples of Moorish, Gothic, and Renaissance work. About one-third of the plates are devoted to decorative woodwork, furniture, metal-work, pottery and glass, ivories, and fabrics.

W. H. W.

TOWN: THEORY AND PRACTICE. By W. R. Lethaby, George L. Pepler, Sir Theodore G. Chambers, K.B.E., Raymond Unwin, R. L. Reiss. Edited with an introduction by C. B. Purdom. 80, Lond. 1921. 5s. [Benn Bros., Ltd., 8 Bouverie Street, E.C.4.]

Essays by such authorities as Professor Lethaby and Mr. Raymond Unwin, impressing on all whom it may concern the necessity of forethought in the creation and development of towns, and illustrating by concrete examples the advantage of such forethought over haphazard and go-as-you-please. To be read by all architects and all town councillors of municipalities who have or may have to prepare town plans.

H. M. F.

BARI. By F. Carabellèse. 80, Bergamo, 1909.

BRESCIA. By A. Ugoletti. 80, Bergamo, n.d.

LECCE. By G. Gigil. 80, Bergamo, 1911.

I MONTI DEL CIMONO. By S. Bargellini. 80, Bergamo, 1914.

VALLOMBROSA E LA VAL DI SIEVE INFERIORE. By N. Puccioni. 80, Bergamo, n.d.

VENOSA E LA REGIONE DEL VULTURE. 80, Bergamo, 1906.

A further half-dozen volumes of the monographs—each dealing with an Italian town or city of artistic note—published by the Institute of Graphic Arts at Bergamo, a series of which the Library already possesses over 20 volumes. The Italian letterpress is in each case from the hand of a writer of note, and the photographic illustrations number 150 to 200 in each of these useful books.

C. H. T.

Building Craftsmen in America

In the last issue of the JOURNAL we regret that, owing to limitation of space, Mr. Barber's answer to a question by Mr. H. M. Fletcher was not given in full. In reply to Mr. Fletcher's question whether America is forming a tradition of building crafts or whether the work is carried on by new-comers, Mr. Barber said:—"In our country the trades are mostly by nationalities. We have Italians for common labour; the pick and shovel men, the common labourers, are mostly all Italian. The carpenters are English and French; the painters mostly French. We are not training craftsmen, and that is the point I want to make; there is no arrangement for the proper training of the artisan; we are absolutely dependent on the foreign population and the foreign craftsmen. When the war came and these men had to go back to their respective countries we were in great difficulty. For instance, all our cassion work is done by Norwegians and Swedes; you could not get an American to go down into a cassion any more than to wait at table. And so with all our crafts. Our waiters are all French; all our cooks are French—it is all a matter of nationalities. But the war came, and then people went back; some remained, and a few eventually returned to America, and we are to-day suffering from a lack of skilled labour. That is what is keeping our prices of construction so high, because there is really more work in these so-called dull times than there are men to do it, and that is why the plasterers and others can stand out for the higher wages that they are demanding and getting. A great many people years ago foresaw just what has now happened in that particular matter, but nothing of any constructive merit has been conceived or put into practice for the supplying of the need.

"There are some, what we call, trade schools, but not enough. The craftsmen are mostly taught in the workshops, and, as I say, we are almost entirely dependent upon foreign labour. It is a curious thing that twenty-five years ago it was hard to get a good modeller in America; a great many practitioners actually imported modellers, and the man who has been doing my modelling for the past twenty-five years was imported at that time. He does my modelling in his own shop. About fifteen or twenty years ago the bronze work that you see with us now was impossible of execution, but we got to a point where we really were able to execute almost anything we could design, chiefly on account of the influx of foreign trade which was brought over, and which came for the chance there was in the New Country. The manufactures of our country are in the hands of Americans, but in the arts there are practically none, or very few, which is most discouraging."

THE IMPERIAL INSTITUTE AND TIMBER RESEARCH.

The Council of the Institute have decided to send to the Prime Minister, the Colonial Secretary, and the High Commissioners for the Dominions, a resolution in favour of the continued maintenance at the Imperial Institute of the valuable collection of building timbers of the Empire.

STREET IMPROVEMENTS AND THE ARCHITECTURAL DEVELOPMENT OF THE CITY OF LONDON.

It has been decided to refer to the Art Standing Committee the consideration of a request from the City Lands Committee, conveyed to the Council of the Institute by the City Surveyor, for an expression of the views of the Royal Institute on this question.

COMMITTEE OF THE PRIVY COUNCIL FOR SCIENTIFIC AND INDUSTRIAL RESEARCH.

On the recommendation of the Science Standing Committee, the report of the Committee of the Privy Council for Scientific and Industrial Research for the year 1920-21, together with the former reports issued since the incorporation of that Committee, have been placed in the Library, with the report on the use of short tow as a binder in plaster.

The interim report to the Atmospheric Corrosion Research Committee has also been placed in the Library.

The Science Committee recommend these reports to the attention of all architects.

RESIGNATION OF MEMBERS.

Mr. P. G. Stone [*F.*] has resigned his membership of the Institute.

Mr. John Cotton [*Hon. Associate*] has resigned his membership of the Institute.

RETIRED FELLOWSHIP.

Mr. Arthur B. Plummer [*F.*] has been transferred to the class of Retired Fellows.

EXHIBITION OF WORKING DRAWINGS.

The Council of the Institute have decided to arrange in the spring of each year an exhibition of working drawings of completed buildings for the guidance of students.

ROYAL BRITISH COLONIAL SOCIETY OF ARTISTS.

Mr. W. E. Riley [*F.*] has been appointed to represent the Institute on the Council of the Royal British Colonial Society of Artists.

City Churches

A letter from Mr. Arthur Keen [F.], Hon. Secretary of the Institute, with reference to the correspondence which has recently appeared in *The Times* on the subject of the destruction of certain of the City churches, was published in that journal on 17 December. Mr. Keen wrote:—

"The old fight for our ancient City churches seems to be breaking out again, and I would like to refer your readers to a letter in defence of them written in 1854 by Sir Gilbert Scott to the then Bishop of London. It was published by the City Church Preservation Society, and it covers the ground so completely, and speaks with such authority and conviction, that one can hardly feel, after reading it, that we have any right to destroy these churches. He makes his claim on the ground of considerations that ought to appeal to every Churchman: he is very contemptuous of those who seek to secure their new churches in the suburbs for nothing, and he shows the danger that lies in the extension of the principle of turning into cash the things that appear, from the material standpoint, to be no longer required. This last point surely needs no urging. The time might come when the eyes of the covetous would be cast even on the Tower of London as a valuable property that no longer serves a useful purpose and might be sold.

"Do not Lord Knutsford and his supporters realise that these churches have a value to those who appreciate the beauty and the associations of them comparable to the value that they might possess as places of worship if efforts were made to meet the changed conditions that have arisen? People go in crowds to week-day services at the church on Holborn Viaduct; the Church Army make full use of their beautiful church near Billingsgate Market; in the hands of the Y.M.C.A. a use for the City churches would quickly be found, and it is not too much to hope that the Church itself will still succeed in finding right uses for them. Apart from any religious uses, they have unspeakable value in telling of the history of an ancient city, in giving relief and rest from the rush of city life, and they go a long way towards making London what it is—one of the beautiful cities of the world. A very well-known American architect told me a few days ago that he thinks so much of London that he has been here 23 times: in his view Paris does not compare with it. It will not maintain this character for long if we allow the Churchmen to sacrifice their churches.

"Miss Lena Ashwell, speaking recently as one brought up in Canada, threw light on the beauty and interest of things and places in this country that are so familiar as scarcely to be noticed by us, but are full of charm and delight for a stranger; and the danger here in London is that hardly anyone realises adequately the beauty of our city."

Allied Societies

LEEDS AND WEST YORKSHIRE ARCHITECTURAL SOCIETY.

At a meeting of the Leeds and West Yorkshire Architectural Society held on 25 November, the President, Mr. John C. Procter, M.C., A.R.I.B.A., occupied the chair, and, after referring to the changes that had taken place in the personnel of the Society during the past year, said:

I hinted last year, and I still strongly feel, that many students are contemplating an architectural career who would be well advised to seek fame in other directions. The pursuit of architecture is perhaps one of the most delightful ways of walking through life, but many of us who were never warned have discovered that to enjoy it to the full, and to practise it in its highest and best forms, demand a position secure from the necessity of mere money-making. With us architects, as with farmers, the times are usually bad.

I suppose there are two main reasons for stagnation in the building trade, which equally means stagnation in our profession. The first is a great shortage of capital available for building ventures, and this I feel is the reason acting most potently against any revival in building. It is a situation impossible for us as architects to combat. We can only watch and hope for better times. The second reason for this stagnation is more tangible—namely, the lack of confidence of the building public in the stability of prevailing prices. Here, I think, we can do something in the way of useful propaganda. Shortly after the war the cost of building became anything between three and four times the pre-war cost, and this enormous increase was not the only penalty which was suffered by our post-war clients. They also had to put up with countless irritating delays and much extremely bad craftsmanship. In a word, while they were paying so much more for their work, they were not getting it so well done as before the war.

It is our business to make the following points public as far as possible. *Firstly*, the cost of building has fallen very greatly, and in all likelihood by the spring of next year will be in the region of twice the pre-war cost. *Secondly*, that when this level, or something near it, is reached, the chances of any considerable further reduction in cost are remote. Hence those wishing to build may as well carry out their projects next year as later. *Thirdly*, the standard of output and craftsmanship has recently vastly improved. There are no longer the difficulties, delays, and petty irritations that in the years immediately following the war made many people wish they had never heard of bricks and mortar.

It would therefore appear that there is no particular reason why people should not build once more, beyond the important one of lack of money. We are told that the turning-point in the general trade depression has been reached. We can but hope that this is the case, and that the coming year will see money being made again. It is obvious that when this occurs a considerable amount will find its way into building channels, for fortunately architecture in many of its forms is, and will remain, a necessity and not merely a luxury. The architect, in common with other artists, is prone to feel rather impotent when brought face to face with the larger financial problems of his art. Unlike the painter, without definite commissions our work must cease, and we cannot simply add to our stock and wait for better times.

After such considerations as the foregoing, it was somewhat of a relief to me to open my last copy of the *Institute Journal* and read Mr. Waterhouse's presidential utterances. The whole tenor and atmosphere of his address at once lifts us away from the sordid side of our profession, and almost makes us forget that it is necessary even for architects to make money in order to live. During the course of his vote of thanks to the President, Lord Sumner of Ibstone, speaking for the layman, said:

"Can nothing be done to educate our taste? Can nothing be done to make the ordinary man, whose eye only requires edu-

eating, appreciate that, apart altogether from the moral side of architecture, that apart from archaeology and style, there is the greatest possible satisfaction to those who have to live among buildings if only their eyes can be educated to appreciate the value and importance of mass, of proportion, of light and shade, even of colour, of an interesting sky-line, the relation of buildings to their surroundings, and so forth?"

This rather complete catalogue sums up the intention of a note I had made weeks before to the effect that "it is necessary to arouse a more general appreciation of architecture—to stimulate in this direction the critical faculties of the public, to invite them to say 'This is good' or 'That is bad,' rather than to pass by in unnoticing silence."

It is not possible to be entirely original in discussing these matters, and I make this an excuse for reminding you of the same speaker's closing remarks, in which he says: "No art which is obliged to express itself in great and costly buildings can thrive unless it educates—I will not say its masters, but its pay-masters." Here is my point neatly rounded for me.

No artist, and the architect is surely not the least of artists, can be happy in his work if he and his brother practitioners are alone able to appreciate it. Neither can our patrons get the full enjoyment from their building ventures if they are not educated to appreciate at any rate some of the intricacies of the art employed on them. From the beginning of things, man has had a certain instinct for building, and consequently for architecture. At some period of our lives a box of bricks has been the most treasured toy of nearly all of us, and later on many whose courses have not led them to become either architects or builders still have an instinct for building. But at present the gifted patron and amateur seems to be almost extinct. Samuel Pepys—an extremely ordinary gentleman—could write intelligently, so long ago as the reign of Charles II., not only on the constructional side of building, but also on interior decoration and detail, and he obviously had a well-developed critical faculty in these matters. In 1665—about the time Pepys was writing—John Webb, the architect, in addressing a client, apparently considered it as a matter of course to discuss the merits of merely having rustic quoins to the building or of rustication the whole façade. How many of us to-day interest our clients with such points? Things which are now a mystery to the many, and consequently of little interest to them, were formerly matters of common knowledge. The resultant standard produced a better general level in architectural achievements than we are getting to-day, and must have made for a more congenial understanding between client and architect.

NOTTINGHAM AND DERBY ARCHITECTURAL SOCIETY.

A Paper on "The Theory of Architecture," by Lionel B. Budden, M.A., A.R.I.B.A., Senior Lecturer in the Theory of Architectural Design in the School of Architecture of the University of Liverpool, was read before an open meeting of the above Society on 29 November 1921.

At the outset of his Paper Mr. Budden defined the various branches of architectural theory, and explained that he proposed to concentrate on the theory of architectural design itself. Three separate problems were stated and discussed by the lecturer—the possibility of a science of art, the nature of such a science in the case of architecture, and the value it might be claimed to have.

Benedetto Croce's "expressionist theory" was first examined, as the latest and most comprehensive philosophical denial of the possibility of an applicable theory of art. It was pointed out that the central fallacy in Croce's argument lay in the fact that the conditions of intuition were identified with those of externalisation: and that once this error was exposed the case ingeniously elaborated by Croce to prove that art had no relation to logic fell to the ground.

The lecturer prefaced his development of the nature of a possible theory of architectural design by a brief historical

critique of the principal schools of theory. He then proceeded to an analysis of content and form in architecture, and arrived at certain standards of criticism as a result. These standards were grouped under two heads, the first relating to subject in its practical and spiritual aspects, the second to composition as the expressive embodiment of subject.

Finally, theory as a substitute for tradition was considered, and the claim made that, under existing conditions, the guidance of logical theoretic knowledge was of indispensable value.

The chief points of the lecture were illustrated by lantern slides.

Competitions

BURGH OF KIRKCALDY WAR MEMORIAL.

The Kirkcaldy War Memorial Committee invite the submission of designs in competition for a proposed memorial, the assessor to be Mr. Alexander N. Paterson, M.A., F.R.I.B.A., A.R.S.A., President of the Institute of Scottish Architects. Premiums—First, £50; second, £30; third, £20; the premium of the successful candidate being merged in his ultimate commission. Designs must be delivered free of charge, and addressed to: The Town Offices, Town Hall, Kirkcaldy, on or before Wednesday, 1 February 1922.

IN NEGOTIATION.

The Competitions Committee are in negotiation with the promoters of the following competitions:

Seaford Recreation Ground, Truro War Memorial, Dundee War Memorial, Kirkwall War Memorial.

COMPETITIONS OPEN.

Auckland War Memorial.
Paisley War Memorial.
Harrogate War Memorial.
Kirkcaldy War Memorial.

The conditions and other documents relating to the above competitions may be consulted in the Library.

THE CAIRO HOSPITAL COMPETITION.

A cablegram was received by the Institute on 19 December from Cairo announcing that the designs of the following six competitors have been selected in the Preliminary Competition:—

JOHN REGINALD TRUELOVE, A.R.I.B.A., c/o Imperial War Graves Commission, Longuenesse, St. Omer, Pas de Calais, France.

Messrs. CACKETT and BURNS DICK, F.F.R.I.B.A., Pilgrim House, Newcastle-upon-Tyne.

Messrs. W. and T. R. MILBURN, F.F.R.I.B.A., 11 Esplanade West, Sunderland.

Messieurs PIERRE and LOUIS GUIDETTI, 31 Quai Bourbon, Paris.

Messrs. LANCHESTER, RICKARDS and LUCAS, F.F.R.I.B.A., and T. A. LODGE, A.R.I.B.A., 19 Bedford Square, London, W.C.1.

Messrs. NICHOLAS and DIXON SPAIN, F.F.R.I.B.A., 19 Hanover Square, London, W.1.

The assessor in the competition was Mr. John W. Simpson [F.], Past President.

Notices

BUSINESS MEETING, 9 JANUARY 1922.

An election of members will take place at the Business General Meeting, Monday, 9 January 1922. The names and addresses of the candidates (with the names of their proposers) found by the Council to be eligible and qualified for membership according to the Charter and By-laws, and recommended by them for election, are as follows:—

AS FELLOWS (2).

BENNETT: THOMAS PENBERTHY [*A.* 1912], 12 and 41 Bedford Row, London, W.C.1; 12 Bedford Row, London, W.C.1. Proposers: Mr. J. Campbell Reid, Mr. Arthur J. Davis, Mr. Chas. H. Gage.

FOSTER: REGINALD CHARLES [*A.* 1909], Council Offices, Buckhurst Hill, Essex; "Casa," Monkham Lane, Woodford Green, Essex. Proposers: Professor R. Elsey Smith, Mr. Horace White, Mr. H. Tooley.

AS ASSOCIATES (5).

BASTO: ANTONIO HERMENEGILDO DE SENNA FERNANDES [Final Examination], 46 Cambridge Road, London, S.W.11. Proposers: Mr. Robert Atkinson, Mr. Claude Harrison, Mr. C. E. Varnell.

FORSHAW: JOHN HENRY, M.C. [Special War Examination], Merridale, Burscough Road, Ormskirk, Lancs. Proposers: Professor C. H. Reilly, Mr. Gilbert Fraser, Mr. T. Taliesin Rees.

PLEDGE: CHARLES TERRY [Special War Examination], H.M. Office of Works, S.W., and 88 Algernon Road, Ladywell, S.E. Proposers: Mr. David Thomson, Mr. Alfred Cox, Mr. Arthur Bentley.

POPE: CLEMENT LAWRENCE [*S.* 1914—Special War Exemption], "Sunny Brae," Moorside Road, West Moors, near Wimborne, Dorset. Proposers: Sir Banister Fletcher, Mr. J. H. Brewerton, Mr. Sydney Tugwell.

SHEPPARD: EVERARD [Special War Examination], St. Helens, Barnwood Road, Beckenham. Proposers: Mr. C. E. Varnell, Mr. Geoffrey Lucas, Mr. E. Stanley Hall.

Members' Column

PARTNERSHIP.

ARCHITECT (A.R.I.B.A.) practising in Southern Ontario town in Canada of over 20,000 population, where there is large scope in the district, would consider taking a partner; must be a clever designer and draughtsman; an Associate or Fellow of the Institute preferred. Highest references given and required. Premium for half share about £1,500.—Apply Box 1921, c/o Secretary R.I.B.A., 9 Conduit Street, London, W.1.

MESSRS. KENMURE KINNA AND S. A. H. MACKAY.

Mr. Kenmure Kinna, of Castle Street, Liverpool, and Wallasey, Cheshire, and Mr. S. A. H. Mackay, A.R.I.B.A., of Liberty Buildings, Liverpool, and 12 Crossfield Street, Warrington, have entered into partnership and will practise as Architects and Surveyors at Liberty Buildings, School Lane, Liverpool.

PRACTICE FOR SALE.

ARCHITECT AND SURVEYOR wishes to dispose of his practice. Established 10 years. Small market town in South of England. Suitable for a young architect. Price £500.—Apply Box 1321, c/o Secretary R.I.B.A.

CHANGE OF ADDRESS.

MESSRS. GEORGE HUBBARD AND SON have changed their address from 112, Fenchurch Street, E.C.3, to 45, New Bond Street, W. Telephone No. 7 Mayfair 7016.

MESSRS. YOUNG AND HALL.

MESSRS. KEITH D. YOUNG, F.R.I.B.A., and **ALNER W. HALL, F.R.I.B.A.,** are taking into partnership, as from 1 January next, Mr. Francis J. Humphry, A.R.I.B.A. The name of the firm will remain as now; and the address is: Young and Hall, 17 Southampton Street, Bloomsbury, W.C.

APPOINTMENTS WANTED.

A.R.I.B.A. desires appointment; is prepared to acquire an interest in established firm after probationary period. Eighteen years' varied experience. Ex-R.A. Schools student. Would join architect in competition or speculative work on mutual terms.—Address Box 1421, c/o Secretary R.I.B.A., 9 Conduit Street, London, W.1.

LICENTIATE R.I.B.A., with Government experience as valuer, Land Valuation Office 1912-1919, and housing, assistant architect, Ministry of Health 1919-1921, desires position in architect's office (country practice preferred), with view to junior partnership. Used to all-round general practice, including quantities, estimating and superintendence of works in progress. Good references.—Apply Box 1221, c/o Secretary R.I.B.A., 9 Conduit Street, London, W.1.

A.R.I.B.A. (35), ex-officer, disengaged owing to reduction of staff, has recently held a responsible appointment under a County Council. All-round experience. Highest credentials.—Address Box 144, c/o Secretary R.I.B.A., 9 Conduit Street, W.1.

EX-CAPTAIN, A.R.I.B.A. (34), married, two children, educated Dulwich College, ex-A.A. Student; own practice before war—now stranded. Twelve years' London experience and 2½ in provinces. Travelled (pre-war) in Italy, France, Germany and Europe generally, and Egypt, Palestine and Syria. Capable, intelligent and keen. Present salary as chief assistant (now terminating owing to lack of work after 2½ years) £450.—Box 0121, c/o Secretary R.I.B.A., 9 Conduit Street, London, W.1.

A.R.I.B.A. (36) seeks engagement. Varied practical experience includes domestic work, clerk of works, management of branch office, structural steel design and factory work. Well up in details, quantities and general office routine. London or South Coast preferred. King's prizeman in Construction. (S.K.B. Constr. Honours Stage.) Salary by arrangement after interview.—Box 8121, c/o Secretary R.I.B.A., 9 Conduit Street, London, W.1.

F.R.I.B.A. recommends youth anxious to get into architect's office as office-boy. Has some taste for draughtsmanship, and is willing to learn. Apply Box 2021, c/o Secretary R.I.B.A., 9 Conduit Street, W.1.

Minutes V

At the Fourth General Meeting (Ordinary) of the Session 1921-1922, held on Monday, 19 December 1921, at 8 p.m.—Present: Mr. E. Guy Dawber, *Vice-President*, in the Chair; 51 Fellows (including 12 members of the Council), 24 Associates (including 2 members of the Council), 3 Licentiates, and a number of visitors—the Minutes of the Meeting held on 5 December 1921, having been taken as read, were agreed as correct.

The Hon. Secretary announced the decease of:—Ashlin, George C., *Fellow* 1899-1915, Past-President of the Royal Institute of the Architects of Ireland; Fletcher, E. G., *Licentiate*; Stainer, Walter, *Licentiate*.

And it was **RESOLVED** that the regrets of the Royal Institute for their loss be entered in the Minutes.

The Secretary announced that the Council had nominated for election to the various classes of membership the gentlemen whose names were published in the JOURNAL for 26 November 1921.*

Mr. T. E. Colcutt [*F.*], Past President, having read a paper entitled "A Plea for a Broader Conception of Architectural Education," a discussion ensued, and on the motion of Mr. John Slater [*F.*], seconded by Sir Reginald Blomfield [*F.*], R.A., whose speech, in his unavoidable absence, was read by the Chairman, a vote of thanks was passed to Mr. Colcutt by acclamation, and was briefly responded to.

The Chairman drew attention to the framed drawings by Mr. William Walcott, now hanging in the Gallery, which had been presented to the Royal Institute through the generosity of Mr. Walcott and his publishers, and to three volumes on *Japanese Temples and their Treasures*, just presented to the Royal Institute by Mr. Gerald A. Kiralfy.

The proceedings closed at 10.20 p.m.

* The names and addresses of the candidates, together with the names of their proposers, are printed in the present issue under the heading "Notices."



A Plea for a Broader Conception of Architectural Education

By THOMAS E. COLLCUTT, PAST PRESIDENT R.I.B.A., ROYAL GOLD MEDALLIST

[Read before the Royal Institute of British Architects, Monday, 19 December 1921.]

MR. PRESIDENT, LADIES AND GENTLEMEN,
—When a man retires from an active career and enters upon a time of comparative leisure, he should be grateful for the feeling that his life's work has afforded him a deep measure of happiness, and that the inevitable worries and anxieties arising in an architect's practice have become only a dim memory. He should be grateful too for the consciousness that, in the course of years, devotion to his art has taken a deeper hold on him; but he should not forget that he has yet much to learn, and that he is, in fact, still a student.

It is with this feeling that I approach my subject. It prompts me, you may think, to be somewhat harsh in my criticism, but the depth of my conviction must be my excuse for speaking with emphasis.

Let me begin with a word of warning. We architects have suffered and are still suffering, perhaps more than any other body of men, from the effects of war. The outlook is still gloomy. But, in spite of this indubitable fact, students and yet more students are encouraged to enter the schools. Mr. A. J. Davis, in a recent lecture, pointed out that in the *Ecole des Beaux-Arts* the percentage of applicants

ultimately admitted is 10 per cent.; those who do not pass have to enter some other calling. I understand a large proportion in our own schools are allowed to take the full course before finding architecture is not their bent. This is unfair to the student, it wastes years of his time, and is a handicap on his future—the schools have done him a wrong and are incurring a grave responsibility. Pray let us face this fact squarely and honestly.

I would suggest that no student should be finally accepted unless he can show, on a short probation, that he has a peculiar native aptitude or tendency to architecture above any other calling. This "aptitude" should be ascertained by a body of examiners independent of the schools. Of course such an examination should be confined to architecture; steel construction and perspective colouring should not be considered.

What a rich store of valuable knowledge we should gain if this world could be revisited by the shade of some Ninevite architect, one of an amiable and generous nature, eager to disclose the mysteries of his early education, of his later proficiency, and of his success as a practising architect! If, being an

enthusiast, he had, from his other world, kept an eye upon architects and their work from the remote ages, when he was actively engaged himself, until more modern times, what a fund of useful information he could give for the guidance of the student of to-day! And with what perplexity he would regard the portentous curriculum now presented in some of our schools. Having a full knowledge of the attainments of the old masters—say, down to the age of Wren—what an astounding revelation it would be to learn that an exquisite skill in geometrical drawing is considered as almost an indispensable means to an end. No doubt he would behold the students with pity, fearing their minds would become unhinged from too much learning.

It seems to me that principals of schools are not aware that almost all architects are wise enough to seek the advice of experts in steel construction, and in many cases in sanitary and electrical work—always, of course, with the concurrence of their clients. Only the rudiments of these trades ought to be considered in the schools.

I confess I have not been in touch with the education offered at the Association during the past eight or nine years; before that period I took pupils with the proviso that two years should have been spent in the drawing office (now an atelier) at the Association. These pupils were among the very best I ever had. In those days I had great confidence in the Association, but I have since been painfully disillusioned as to its merits in the present day.

The very last assistant to come to me emanated with credit from one of the schools, but he had no practical knowledge of the work he was required to do in my office. I had to dismiss him summarily with his confounded theories.

Another man passing from a school, and coming to me, could not calculate the dimensions for a steel floor girder carrying a distributed weight, although a few weeks before he had become an Associate. I had hidden Dorman Long's book. He was quite an excellent assistant, and I thought none the less of him for his inability to make this calculation. I could not have done it myself. Are there any practising architects who do practise expert engineering and design their own steel construction?

I am allowed to quote from a letter from a student of one of the schools, which is a drastic criticism on the system in the schools: "I sometimes feel I wasted years as a student, where we were taught nothing but design in the Classic

manner, no building construction to speak of, and an endless amount of history. This was all very well in its way, *but it has been of no use to me in much of the work I have been faced with in the past two years.*"

With your permission I will remark on a lecture on the theory of architectural education delivered in Liverpool and published in the August JOURNAL of the R.I.B.A.

Let me preface any disparaging remarks. I may observe that I join with Professor Reilly in his admiration of the clearness of expression and the keenness of intellect with which the lecturer has expressed himself, but I view with grave apprehension the system of education which he advocates, which appears to be in vogue in many schools as well as in Liverpool. Throughout the whole curriculum Architecture, as a Fine Art, seems to be almost a secondary consideration. Yet in spite of all the appalling range of studies set before the student, one can extract some amusement from the conclusions to which our lecturer arrives. For instance, there must be three grades in the practice of architecture: (1) the local practitioner, (2) the constructional expert, (3) the designer. To these add the arbitrator and the perspective colourist. I beg that these titles should be reconsidered. The local practitioner might be rung up in the very dead of night to attend a what's-its-name case. The colourist might, in a slack time, undertake some repainting in his parish church. To help him in his charges he might look up an old account for similar work: "To mending the Commandments, altering the Belief and making a new Lord's Prayer, 2rs."

Our lecturer advocates five years of study in all. Some of you may have read his lecture, but for the benefit of those who have not done so I will give a short summary of the subjects the student is expected to undertake in his five years so that he may be qualified for the particular branch which he wishes to take up. If, for instance, he elects to be a "local practitioner," he may omit "presentative technique and rendering," and I should think he would be exceedingly glad to do so.

A summary of studies suggested for the first three years embraces: Studio work, construction design, measured studies, history, archæology, theory of planning and design, applied geology, physics and mechanics, construction, materials, surveying, sanitation and hygiene, descriptive geometry, sciography and perspective, and presenta-

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tive technique and rendering. "Presentative technique and rendering" is good. There is a lot more to learn including law, finance, etc., etc., but pray don't be alarmed, "he only wants to make your flesh creep."

Our lecturer admits that two periods of six months during the last five years should be spent in an architect's office!—and there you are—fully equipped to suck the blood of the first client caught in your web of theories and coloured perspectives.

It is obvious to his "common sense . . . that omniscience nowadays is humanly impossible for any single member of the profession. . . . He cannot become an ideal architect." It takes nine men to make one tailor, but, thank the gods, only five students to make the ideal architect; hence his proposal to cut him into sections, *i.e.*, the practice of stereotomy—let us be scholastic.

On looking through some Liverpool prospectuses it is pleasant to find extremely good designs done by students who, having probably wisely ignored the greater part of the school curriculum, should, I presume, be classed as expert designers.

All these productions are for important public buildings, and are designed in what one may call a columnar style, having its birth in a great measure in the temples of the old world, while the general effect is imposing and pleasant, and in modern times quite appropriate in countries that are blessed with a brilliant atmosphere. But even in these countries the use of columns, forming colonnades, must be a serious obstruction to the light indispensable to the main building.

I would ask whether the schools are wise in requiring students to submit designs of palatial buildings—should not the subjects be mostly of a domestic or business or a civic character, and on possible sites, sites they would have to consider in real practice? Important public buildings are not of everyday occurrence. Certainly not with the grand and terraced open spaces shown in their designs, which add a fictitious value.

A few months ago I had the good fortune to see in our galleries several drawings of an imaginary restoration of a ruined city in Italy, the work of a student from the Liverpool School. These drawings were awarded the *Prîx de Rome*. They were admirable drawings, and were extremely interesting as showing how splendidly the old town must have harmonised with the beauty of the surrounding country, an accidental though happy result that could

not have been conceived by the founders of the city. (The beautiful curve to the High Street at Oxford is the result, probably, of an old roadway.) The landscape shows the colouring student at his best, but the architecture, consisting of plain colonnades and indications of larger buildings, is happily designed. I confess, however, that I could not see that this attempt at imaginary restoration could possibly aid the education of the architectural student, although it might be interesting to archæologists. Not only is the student not benefited by such exercises as these, but the public is dangerously misled. A drawing that is pleasing to the eye, well coloured, and artistically put down, gives to the untrained observer the impression that the architecture must necessarily be good.

Works such as these are, to my mind, object lessons in how not to do it, but the Architectural Association seems to be encouraging these regrettable and really dishonest practices. I can call to mind published drawings issued by that body where the foreground and background are the especial points of interest, being charming bits of black and white, the trees perhaps a little sloppy, but still having a good deal of artistic merit from a landscape painter's point of view. The architecture, which ought to be the centre of interest, is sometimes good, often indifferent, not seldom very bad. Camouflage is a word over-used, but here I think it fits the case.

In the A.A. curriculum, now before me, there is a "third year" student's design for a gamekeeper's cottage with a perspective view. In the foreground of the perspective is a pool or "head" of water apparently flowing under an arch and under the cottage. On looking at the plan, however, one finds that the pool is a stagnant one, stopped by a deeper wall of the cottage, this arrangement being contrary to all building by-laws and to the laws of hygiene. The picture is charmingly drawn and is a good bit of pen work, but the design for the cottage is really entirely commonplace and thoroughly suburban, and is, too, without evidence of any study of architecture.

There are hundreds of gamekeepers' cottages scattered about the country, homely and picturesque in harmony with their surroundings, and suitable for their purpose. Many of those, for instance, in the Cotswolds might be studied for their architecture—but evidently have not been. Who does not know them—with their dog kennels and a display of dead vermin crucified as trophies of vigilance?

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I hope I may be pardoned if I take exception to the title on the Association prospectus. The word "Architectural" has two distinct f's in place of two t's, and ends with a capital L. "Things are not what they seem."

But please understand that I have no quarrel with the making of beautiful drawings, *done truthfully*, to represent as nearly as possible the form that your thought, knowledge, and aspirations will take when your ideas become facts. I advocate water colour sketching from Nature as an aid to realising the beautiful. I began to dabble in the art when I was sixty-nine, and have since found instruction and delight in spoiling heaps of good paper; it has helped me to a greater love of Nature, and that in itself is a great gain. My one regret is that I did not take up sketching years earlier, thus acquiring something that would have led me to a truer feeling of the beauty of this world—which may be also the heaven we hope to enter.

I am grateful for the patience with which you have listened to my somewhat outspoken views. My apology is that I am profoundly interested in my subject. The future of our art, for good or for evil, lies in the hands of the students of to-day, who must be equipped to deal with newer wants and conditions in building, and with changing conditions of social life.

Though the remainder of this paper is more particularly addressed to students, I indulge the hope that it may be of interest to others.

I have said the schools cannot offer to the student an education other than a mere exploitation by means of which he can earn his living. I am greatly daring perhaps in believing it possible he may attain a broader education during his student days, an education "tending to the deepest good, intellectual and moral, to a purity of truth and a delicate perception of beauty."

Please allow me to cite an impressive quotation from Gilbert Murray. Speaking of Greece, he says:—

"Her great experiences were undertaken with the knowledge that success depended on the education of her citizens not only in efficiency, but also in restraint and generosity and a high conception of the dignity and possibilities of human life ennobled and advanced by beauty, wit (*i.e.*, wisdom), intelligence and, above all, by liberty."

Let me ask students seriously to consider these lines. With the help of teachers and lecturers a

way may be found by which they can train themselves in the education thus suggested. They should aim at getting a good knowledge of sculpture and painting, and, under direction, should enter upon a course of reading, choosing the best literature, both prose and poetry. In one branch of study no teacher is required; I mean in training the faculty of observation, that is in retaining a correct mental vision of some particular object. (Since writing this I find "observation" is in the A.A. curriculum.) These studies can be followed during and, of course, after, the preliminary work of the schools.

As to reading, I would advise you to turn to the chapter headed "The Troad" in *Eothen*. It encourages the student who has little or no Greek. Through Pope's *Homer's Iliad*, Kinglake, in his early boyhood, learnt to know the spirit of Old Greece. He was "not bothered with lexicons, by solid rations of 'Poetæ Græci' cut up by Commentators and served out by schoolmasters." You will remember that Keats made his first acquaintance with Homer through Chapman's translation. My own humble attempt with Pope's *Iliad* was sixty years ago—and failed. The last few years I have found pleasure in Murray's translations—but the lost years cannot be recaptured!

By intelligent observation, first observing and then drawing from memory, you may learn and absorb more than by merely drawing from the object; for the latter may be done almost automatically. The two methods should be studied side by side, together with the important work of measuring and plotting old examples of architecture.

Students should visit the Acropolis, study it early and late in the day, and under varying atmospheres. Here is a golden opportunity for cultivating the faculty of observation, and a precious means of stimulating the mind to a sense of beauty and an appreciation of truth in art. When one sees the Parthenon, one's mind is gradually impressed by the thought that this culmination and crown of Doric architecture did not spring from the brains of its designers complete in truth and beauty "like Athena all armed from the head of Zeus." They had before them the temples that preceded their age; they arrived at absolute perfection by many and slow stages, and by observing the failures as well as the successes of their predecessors. It was by a true valuation of these that they reached their goal.

It was in 1904 that I saw the Parthenon for the first and only time. We were a party of five, and by

good fortune all of us could silently contemplate and absorb the beauties of the great temple without breaking into fatuous exclamation. We were looking on the noblest remains of man's handiwork to be found on the whole face of this earth, work that has withstood the corroding action of climate and atmosphere for nearly twenty-four centuries, though it has been almost ruined by the action of man. The remains look as fresh from the hands of the Greek workmen, helots and barbarians, as though finished but yesterday. Time, it would almost seem, has lovingly cared for and protected the exquisite workmanship of these unknown men. In a sense these men are one with the architects and sculptors—the memory of whom and of the work they did may last for centuries to come.

You all understand entasis as employed in the Parthenon, how it pervades all parts of the building, so that the very columns, as it is supposed, radiate to a point in the sky, I believe, 4,800 feet high. You know thoroughly all the detail; you have drawn out the orders from the instructive "plates," which show so carefully and valuably the measurements of all parts of the "order." You may think, as I certainly did, that you can fairly visualise the reality. You cannot do so; nor can it be expressed by the cleverest perspective drawing. It is only by actually seeing the building that you can truly value the entasis, and that you can realise the refined outline of the mouldings, which show no commonplace bow-pencil rigidity of outline. Everywhere the light and shade have been perfectly considered; this is especially apparent in the fluting, and the strength that this seems to give to the columns. One is impressed by the exact proportion of all parts to the whole. In the Parthenon—in its perfection of design, colour, and workmanship—is beheld in visible form the glory that was Greece. To quote from one of Henry James's familiar letters to his friends:—

"There is a mystery of *rightness* about that Parthenon that I cannot understand. It sets a standard for other human things, showing that absolute rightness is not out of our reach. But I am not in a descriptive mood, so I spare you. Suffice it that I couldn't keep tears from welling into my eyes."

Another writer says:—

"The Parthenon holds fast upon your brain with its own dim and infinite meaning."

We saw the Parthenon and the surrounding buildings under a cloudless sky; had the day been a grey one, one's emotions might have been less intense.

We entered the Acropolis by the portico of the glorious Propylæa; we departed impressed and thoughtful. For myself, I was profoundly impressed and humbled by a regret that only as a student in my old age had I drunk from the fountain head of our art, and that I was absorbing an element only in that which is truth and that which is beauty. Of course, one can only play with one's imagination in reconstructing the interior of the Temple; one may conceive something of its beauty; yet, in spite of all, one cannot conceive being moved by the spiritual emotion (as opposed to intellectual) one experiences on entering a mediæval cathedral, or in reading beautiful poetry, or in the splendour of sunset.

It would be hard to define this particular emotion. In my own case what little I claim may have had its birth in my early youth, always attending a fine twelfth-century church when at home and a village church when away at school. On coming to London, before I was sixteen, acting on my mother's command, I regularly attended church. I did for a time, but entering a London church seemed like going into our town hall. I distinctly remember I really felt "going to church" was when I first went to the Temple. Here was all the difference. This feeling has never left me. Amiens is more to me than S. Peter's.

Some of this spiritual emotion we felt some days later on entering and viewing the glory of Santa Sophia. Here one did not find the perfection of finish so conspicuous as in the Parthenon; on the contrary, the surface of the porphyry columns in the great church is distinctly wavy. Curiously enough, this lack of finish seems here to be right; it gives a refreshing human touch, appealing to all, and these slight imperfections, escaping the mechanical, give an added and precious value to the whole.

There is at a short distance from the Acropolis a small Doric temple, the name of which I forget. In colour, and in the proportion of the order, it differs materially from the Parthenon; and it struck me as being commonplace and indeed displeasing; the proportions seemed wrong, and as displeasing as is the Doric entrance to Euston Square Station. It showed no intricate light and shade, owing, no doubt, to the muddy colour of the stone or marble. This is an object-lesson showing how much depends on site, on colour, on proportion and on atmosphere.

Students should especially study Doric flutings and compare them with those of the later orders: to

me the flutings of the later orders appear a "falling-away" from the ideal, and tend to make the column look commonplace.

The Parthenon impresses the beholder with being exactly the right size: it could be neither larger nor smaller. Since seeing it, I have ventured to question whether the grouping of the parts of Inigo Jones's beautiful Banqueting Hall would not have been enhanced if the building had been, say, one-third larger; this would have given opportunity for more wall space, perhaps on each side and above the window openings. It might be valuable to the student to make comparative studies in the proportion of this building.

In studying old buildings, keep an open mind and do not be led away by a style that may be fashionable for the time being. Do not take it for granted that Inigo Jones is the father of English architecture, though he certainly must be considered the father of Italian architecture as practised in England. Remember that you are heirs of the men who built our cathedrals and our manor houses.

Pray do not consider all the old masters infallible. Go to Vicenza and look critically at Palladio's buildings: with the exception of the "Basilica," and perhaps one other building, his work is not altogether beautiful. It would almost seem "he had most carefully divested himself of all æsthetic sense." Go to Oxford and examine the early work of Wren, and you will see that even Wren was not always successful.

It is generally accepted as a fact that the benign influence of Greek poetry and literature is traceable in the poetry and literature of all Western nations through succeeding ages down to the present. It has also been said that this benign influence is apparent in our architecture, and even in the very chairs we use. I confess that, being ignorant of

architectural history, it is difficult for me to find Greek influence either in mediæval or Renaissance buildings. But the subtle Greek mind, the Greek appreciation of beauty, may, I think, be found in Santa Sophia, which was built by the Greeks.

During the last three or four decades there has been a revival of Italian architecture in America, as well as in England. We have picked up threads from Italian masters, before and after Palladio, and threads from our own masters. We have woven these threads, without due consideration whether they had the quality of beauty or not, into patterns or samples expressing some of the evils and some of the good pertaining to the old masters. Would that some master-mind would arise and teach us how to capture Greek thought as it first influenced Rome, pointing out where the Romans just missed the beautiful, and thus guided, we might in time achieve in our buildings something of fine art.

Please allow me to cite a hackneyed quotation:

"The glory that was Greece,
And the grandeur that was Rome."

This always seems to me a subtle criticism, not intended by the author, of the architecture of the two countries. You cannot add to the supreme word "glory"; "grandeur," however, may easily sink to "grandiose."

Young men may indulge in visions of a style born of tradition and adaptable to the new conditions. But their visions must be exalted: they must not be confined to the mere work they are engaged upon. "Weary of the past," we are hoping for a loftier, brighter and simpler age bringing with it what Wordsworth prayed for: "plain living, high thinking and homely beauty." The self-education I advocate I believe in my soul to be right and sound. I have "preached" to you because, with the knowledge of my own early limitations, I have wished to help you to attain much that I have missed.

Discussion

Mr. E. GUY DAWBER, VICE-PRESIDENT, IN THE CHAIR

Mr. JOHN SLATER [F.]: Mr. Vice-President, you have asked me to propose a vote of thanks to my ever-young old friend, Mr. Colcutt, for the Paper he has read to-night, and I do so with a great deal of pleasure, a pleasure that is not really diminished by the fact that I do not find myself able to agree with a great deal which he has said. We have recently looked upon Mr. Colcutt as enjoying his *otium cum dignitate* surrounded by his books and pictures, and casting an occasional cyni-

cal eye upon us who are still in the hurly-burly; but from the paper he has given us to-night we get a very different idea of him. He is a veritable St. George, out for dragons, and having heard of this terrible dragon, Architectural Education, as given in the schools, he comes back to the arena, armed *cap-à-pie*, and goes for the dragon with all the vigour of youth.

I agree with him that criticism is always useful, and no institution that cannot stand criticism is worth any-

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thing; but I do feel to-night that the dragon which Mr. Colcutt is fighting is, to a considerable extent, a Frankenstein monster, which he has evolved out of his own moral consciousness.

Let us look at some of the complaints he makes. He first complains that he got an assistant who had been with credit through the Architectural Association's schools—

Mr. COLLCUTT: No, a school; I did not name the school.

Mr. SLATER: At any rate, he had had some education, and he turned out a duffer. Well, Horace tells us that a great many brave men lived before Agamemnon, and I am afraid duffers existed before architectural education existed, and will continue to exist. But I do not think it is fair to blame the schools for individual failures. Then he has a letter from a student who states that the time he spent at an architectural school was very much wasted and did not help him in his general work afterwards. Is it not possible—I throw this out with diffidence, because I do not want to lay myself open to an action for libel—is it not possible that if the preliminary examination which Mr. Colcutt advocates had been in operation, this gentleman might have been told he had better devote his energies to something other than architecture? With regard to this preliminary education by an outside body before the student enters his course, is it a feasible thing? Every year a number of students leave college or school and start on their professions: some take up law, some medicine, some science, some architecture. But at the start they know nothing whatever about these subjects; and how can you examine a man on what he knows nothing whatever about? If anybody were to attempt to examine me in Chinese, I think it would be a fiasco.

Mr. COLLCUTT: I say that after studying for two years he should go before a body of examiners.

Mr. SLATER: I am coming to that. What, I think, can be done, and what ought to be done—and here I may say Mr. Colcutt has hit the right nail on the head—is that the professors and teachers in the schools, who are the only people able to judge, ought carefully to consider the work of the students after the first six or nine months, and if they hold the opinion that any of them have mistaken their vocation, they ought, in the most uncompromising manner, to warn them off the course. I think there is some danger, looking at the rivalry of the schools and the great natural desire on the part of all of them to have a very flourishing school under their control, and I am half inclined to think there may be a little relaxation of this weeding-out process. I am sure it is very desirable that the weeding-out should take place.

Mr. Colcutt said that architecture as a fine art is of secondary consideration in schools, yet very soon afterwards he complains of the students being allowed—per-

haps encouraged—to make picturesque settings for the buildings they have designed. I remember some artists who have designed the frames for their pictures; therefore I do not think it is very much to be deprecated that a student should be taught that there is something in the surroundings of his building, and that he may very justly endeavour to supplement the building by gardens and terraces, and even by rock pools, which may be stagnant water or not.

The next complaint Mr. Colcutt makes is that too many subjects are taught in the schools. I am bound to say that, at the back of my mind, I am a little disposed to agree with him; but it is a fact that a large number of people for whom I have a very great respect hold a different opinion. During the last 30 or 35 years I have listened to most of the addresses to students that have been given by the Presidents of the Institute when the distribution of prizes takes place, and they have, almost without exception, called the attention of students to the fact that architecture is not an easy profession, that drawing is not sufficient, that students must know a great deal besides drawing before they can attempt to practise architecture. I will quote only one short sentence from one of those addresses:—

“Although experts may be consulted on steel construction, sanitary work, electrical work and heating, yet the young student ought to be able to become master of the principles involved in such matters.” Those were the words of Mr. Colcutt 14 years ago.

Mr. COLLCUTT: I do not go back on that now.

Mr. SLATER: You must bear in mind that architectural education has barely attained its majority in this country. England has been behind nearly all other countries in endeavouring to promote architectural education. Take the Greeks. If there is any truth in the theories which Mr. Hambidge has lately promulgated, the architects of the Greek buildings must have been very skilled mathematicians and scientists. In Rome, where the profession of architecture was one of the most lucrative, it is impossible to conceive that there were not schools for teaching architects; and even in the benighted Middle Ages you will find that in the fifth century A.D. King Theodoric spoke of the honour of the architectural profession in terms which we should be very glad to hear from officialdom at the present day. We ought to look at the effects of this systematised education in the countries where it has been carried on for some time. Look at France. That was the first country which instituted any system of architectural education. Everyone, I suppose, will admit that the public buildings which were erected in France in the seventeenth century are of very high merit; and there cannot be a doubt, I think, that the excellence of these buildings was due, in a very large degree, to the supervision and training of architects which was carried out by the Académie d'Architecture, which was founded in,

I think, 1674, and that work was continued by the Ecole des Beaux-Arts. Take America: that country has a far wider and more comprehensive system of education than we have. Have the results of that turned out to be bad? I need only refer to the wonderful series of drawings which lined this room a few weeks ago, to show that the education in architecture which is given in America has not done away with originality or spoilt the designs of the buildings.

Architectural schools cannot do everything; they have their limitations, and they would do well to recognise them. They cannot—and I do not think they pretend to—turn out at the end of five years a sort of super-architect who is prepared for every branch of practice which may come to him. They cannot theoretically teach professional practice, and I should agree with Mr. Colcutt as thoroughly as anyone can that before a man attempts to practise architecture himself he ought to spend some time in an architect's office. But, granted these limitations, I cannot help feeling that the architectural schools do a great deal in guiding a man in his studies, in telling him where he goes wrong, in giving him help and direction in many ways. And as for the students themselves, I am sure that the rivalry between them, the opportunity which one man has of seeing and criticising the work of his fellows, of seeing how a particular problem is treated by one man differently from another, must be of benefit to him—to say nothing of the friendships which are formed in these schools, and which often last a lifetime.

Mr. Colcutt has been rather destructive in his criticism, but I rather miss any constructive criticism. Would he go back to the old happy-go-lucky, go-as-you-please days of the '60's and the '70's? I doubt it. A visit to Athens, to see the glories of the Parthenon, is a very good thing indeed; but how many, in their student days, can afford to go there?

Before I close I have one request to make to Mr. Colcutt. I would ask him to visit one of the most active architectural schools; I do not care whether he chooses the Association school, or the Gower Street school, or the Liverpool school. Let him see the work the students are doing, see the way in which they are being trained, and I cannot help thinking that if he goes there he will be very warmly welcomed, and any suggestions he may make will be, if useful, acted upon. If he will visit these schools, I think he will find some of "these confounded theories" which he talks about have really a very good practical result, and I hope he will remain to bless what he started out with the intention of cursing.

I must apologise, Mr. Vice-President, for having detained you so long, but I have a twofold excuse. I have been rather actively associated, during the last thirty years, with the formation and furtherance of schemes of architectural education in this country. I remember

the early days when some of us used to meet at Mr. Leonard Stokes's office and endeavour to form some sort of syllabus for a day school at the Association. Many were the head-shakings, and numerous the doubts as to whether any day school of the Association could ever succeed; but the puny bantling of those days has turned out a very stalwart youngster now. My second reason is that I have been honoured for many years with Mr. Colcutt's friendship, and I really do want to convince him that these schools and the effects of them are not so bad as he has been led to think. I can assure him that I think it a very sporting thing of him to have written this paper and come down here to deliver it. It is only too good a thing to think that our Past Presidents still retain an interest in what has gone before and in the work of this Institute, and I beg him to believe that it is by no means as a mere *façon de parler* that I move this vote of thanks to him.

The CHAIRMAN: Before I call upon some other speaker, I wish to say that the President has written to express his great regret at not being able to be present, and that I have been requested by Sir Reginald Blomfield—who was coming here to-night to second the vote of thanks, but, unfortunately, is laid up with neuritis—to read you a few words from him. I will do so. This would have been his seconding of the vote of thanks:—

"Mr. Colcutt's charming, if discursive, Paper is in the nature of the apologia of a man who all his life has been an artist, and who, like all true artists, has found that with advancing years and increasing knowledge his sense and appreciation of beauty is ever growing stronger. He has touched on certain defects in our present methods of education to which many of us are alive—the excessive attention to mere draughtsmanship and its tricks, the neglect of ordinary building construction, the search for the grandiose instead of the search for that exact adjustment of means to ends and the elimination of the unessential which is, after all, the real business of architecture. Mr. Colcutt realises that three or five years' training is not enough, that not five or fifteen or any number of years is really adequate, because the true architect is always observing, always analysing, always endeavouring to reach the ultimate, inevitable form that exists in idea, but is never realised in fact. But this being so, one should not be too hard on our schools for failing to do the impossible; one would only suggest to them that they should study more closely what an architect has actually to do, and how best he can do it.

"I entirely endorse Mr. Colcutt's point that artists are born, not made. It has been the fallacy of this country since the days of the 1851 Exhibition that anyone can become an architect, or, for a matter of that, a painter or a sculptor, by setting out to be such and going through some sort of training. Our State-aided Art training proceeds on this assumption, which accounts

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for the vast amount of incompetent work in which we abound. Some of us recollect the old days of pupillage, when offices were largely stocked with the fools of the family. My own opinion is that the initial endowment of a creative artist—and if an architect is not that, he is nothing—is much rarer than is supposed. One need not say with Nordau that all artists of genius are lunatics, but one should realise that those who possess the intellectual, imaginative and emotional endowment which will qualify them to pull their weight in the community as architects are few and far between; and if this fact was realised in our schools, there would be drastic changes in their organisation and methods.

"I heard it said recently that our young men no longer care for the art of architecture and are only interested in it as a business. I do not believe it. I am convinced that there is as much enthusiasm for this, the noblest of the arts, as ever; but if there are backsliders, and if those who start with enthusiasm are quickly choked by the tares, let me commend them to the study of Mr. Colcutt's address, and learn from him something of that high enthusiasm which has sustained him so well through his long and very honourable career."

Mr. Ernest Newton (R.A.) wrote as follows:

"I am very sorry I am not able to come to the Institute to-night.

"I have not seen Mr. Colcutt's Paper, so that I do not know exactly what his views are on the very important question of architectural education. It is, perhaps, a little early yet to judge the results of school training. Every system probably has some drawbacks. The old method of apprenticeship answered very well for industrious apprentices who had the good fortune to serve their time under a really capable architect. Being constantly in touch with the work of a master who was engaged in designing and carrying out real buildings, and not merely problems in design, was an invaluable experience for anyone who was wise enough to profit by it; but I think that even in the best circumstances most pupils would have valued and benefited immensely by some school training and in the preparation of projects conceived on a more generous scale than any they were likely to come across in their masters' offices. Unfortunately, however, every one under the old system did not always have the good luck to serve a competent or even conscientious master, and sometimes finished his term of apprenticeship with nothing much more valuable in the way of architectural training than a certain facility in tracing and copying specifications.

"Is not the ideal system a carefully arranged combination of school work and office work? A student who has profited by the excellent training which the schools afford might with great advantage to himself spend a year or two in an office where he would come in contact with actual architectural problems and see real

though, from his point of view, perhaps, somewhat humble buildings taking actual shape in three dimensions. The time spent in an office should be considered as an essential part of his training."

I will now ask Sir Aston Webb if he will kindly say a few words.

Sir ASTON WEBB, P.R.A. [*Past President*]: Mr. Vice-President, I seem to have arrived at that stage of life when I cannot attend a meeting without being expected to say something. I came to-night entirely to enjoy my old friend Mr. Colcutt's address, and I have enjoyed it very much. I think of Mr. Colcutt when he and I were quite young men and he won the Wakefield Town Hall competition, which we all thought, and rightly thought, a great achievement. And later on I remember when we were invited by the father of our President of to-day to a dinner, which Sir Frederick Leighton attended, and at which the competitors for the Imperial Institute discussed the conditions under which that competition was carried out. And I remember (with mixed feelings) when the announcement was made that Mr. Colcutt's design had been selected. I remember the charming red-brick house in Bloomsbury Square, with a sunflower as finial, a customary decoration in those days. And I remember the numerous other buildings, which have always kept in my mind a fragrance and a pleasure when I have thought of Mr. Colcutt and his work.

And now with regard to the more serious part of the Paper, architectural education. I like to look, more especially, upon the part of it with which I find myself in agreement. I find myself quite in agreement with what he said about the large number of students who are now entering the architectural profession; I think it is a very serious thing indeed. The outlook is not very favourable at the present time, but no doubt it will improve; I am sure it will. Still, I do not know how the number of students now coming in are going to find work. And, apart from that, it is only leading young men to a great disappointment in life to educate them and encourage them in a calling for which they have no real feeling. Some time ago I had a sort of epidemic of invitations to address students at schools of art round about London. I went to some of them, and enjoyed the proceedings very much. At one the master took me round the school—this was not an architectural school, but a general art school. And I saw some very terrible things, and I said to the master: "Do you ever advise a man not to become an artist?" "No," he said. "But," I said, "don't you think it would be rather a good thing, occasionally, to say 'I do not think you are adapted for an artist; I advise you to try something else'?" "We never do," he said. That, I thought, was a very serious thing. And, having gone round the school, I addressed the students and mentioned that I thought many of them, with the kindly

advice of the master, would be better advised if they were to take up some other calling. Since that time the epidemic of invitations to address art students has entirely ceased!

One point in Mr. Colcutt's address which interested me very much—because, I think, there is much to be said on both sides—was that he seemed to think students were invited to begin at the wrong end; that they were invited to design large buildings, of a kind which they would never have an opportunity of carrying out, and that when they had to design little cottages, such as they would have a chance of carrying out, they were not altogether equipped for the work. That is so, of course. But I am inclined to think that the big end is the right end to start with; that you want to induce a student to look at a whole scheme, and to think of the symmetry and largeness of it. I think you may see—I often look at it with that view—the same bigness in a small cottage as in a big building. I doubt if educating a man on a little cottage, such as a gamekeeper's cottage, would qualify him for building a great building, or a Temple, when he grows up. I speak with great diffidence, because I am not sure about these things; but I think that, on the whole, it is better to begin with the big thing, and that that bigness will be reflected by bigness in his work, even though that work is small in size. I happened only to-day to see a small silver George III. sauce-boat, and the man with me, who was a master, said: "This is the biggest thing you could make." It is possible by knowledge and training to get that bigness into small things which is very desirable.

Then I would like to say one other thing. I agree entirely with Mr. Colcutt about observation for students. When I was a student I went to churches, and measured little bits of mouldings and arches. We were not asked to do the whole thing in those days; we were asked to get a little Early English window, or the base of a porch. But we ought to try to think of the thing as a whole. I have said here before to-night that we ought to draw more from memory, not to plot it on the spot; to plot it from memory, then go back to the building and find out where the difficulties and errors are, and correct these on the spot. I remember many years ago I took a holiday at Southwold, when Walberswick was a great place for artists to go to. On this occasion there was an American artist who was instructing a very large class, and you would see of a morning a row of ladies mainly, but there were some men too, on the beach painting the sea. But they all had their backs to it. They had to try to paint their impression of the sea, and they would take peeps over their shoulders. The instructor's idea was that they should paint their impression of the sea, and not try to make an exact copy of what they were seeing. It took away from the students the desire to represent

subjects photographically. It is possible to measure buildings on the spot and put all down and yet not know the difficulties which the designer had in putting it together. That is what you have to find out. I am spending about half a day a week at St. Paul's Cathedral at the present time, and nothing could impress anybody more in regard to the extraordinary genius and general knowledge of Wren than to spend many hours examining St. Paul's. You say we must not worship Wren too much; no doubt we ought not to, but anybody who studies St. Paul's must worship Wren. He was a President of the Royal Society—I think he was its first President; he was a highly scientific man and a great astronomer, and certainly he was the greatest architect that England has ever turned out. So it does not show at all, I think, that because a man is instructed in mechanics, in engineering and such-like, that he need not also be the very finest and most artistic architect.

That is all I want to say, except that it is delightful to see Mr. Colcutt here, and for this reason: that I think as we get older we ought—I have tried to do it myself—while taking an interest still in one's own affairs, also to take an interest in the young men who are coming on, and so live again, if we can, a second life in the progress of the younger men who are going to take our places.

I thank Mr. Colcutt very much for his Paper.

MR. E. T. HALL [F.]: Mr. Vice-President, ladies and gentlemen, it is a great privilege to me to be present to hear my old friend Mr. Colcutt read this Paper, with his delightful youth, and his reminiscences going back, as they do, for a long period. In some respects one cannot, I think, agree with all that he has said; but I join with all who have preceded me in the intense admiration we all feel for him.

I should like to appeal for a little broader education of the public in architecture. We must not forget it is a very important thing to architects that there should be a cultured public who can appreciate their work, and I venture to think we should all, so far as our influence lies, use it so that in every school a part of the regular curriculum should be the teaching of sketching. It teaches boys to observe and to record their observations; and when such teaching is spread over the whole country, it will induce an appreciation of architecture, which will go largely to help architects, and do much for architecture itself.

I venture also to suggest—what has not been much referred to to-night—that a very potent influence in architectural education is the encouragement of travelling. I agree with Sir Aston Webb that the method of simply measuring up little mouldings has nothing to do with the breadth which is required in designing architectural compositions. If you travel—and I think travelling is the greatest education any man can have—you get a grasp of magnificent buildings, you see the environments in which they have been created, and you

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can see and study the mankind of the district who have expressed their aspirations in buildings. That, I think, is of incomparable value. Take as an example Inigo Jones. He was not trained as an architect, and did not turn to architecture until he was 28 years of age. He went on a visit to Italy, but when he came back he did not start as an architect; he was engaged for nearly ten years in designing, mostly masques and scenery for theatrical plays. Yet in the magnificent backgrounds of palaces he showed the result of his studies abroad. It led to the Court and the nobles becoming his clients. During that period he made several alterations and additions to buildings, but it was not until ten years later, when he returned from his second visit to Italy, that he became the great architect that he was. There can be no doubt that in his design of the palace at Whitehall the inspiration came from the breadth and greatness of the buildings which he had studied abroad. Take, again, the case of Wren; he did not become an architect until he was over 30. He was, as Sir Aston Webb has already stated, a great scientist. He drafted the Charter of the Royal Society, and he was, in every way, a great and brilliant genius. The only journey he made, apparently, was one to the North of France and to Paris, when he made a very intensive tour of Paris. When he returned he seems to have been inspired—Paris was not then rebuilt; it was still a mediæval city—to make London the greatest city of the world, and he produced that beautiful plan which we have all admired, and which we regret was not carried out. If you take other architects—Gibbs, and Robert Adam, and Sir William Chambers—none of them had any office training whatever, except that the last two were for a short time in Paris under Clérissieu. Their education was entirely derived from their travels abroad, and they were all great men in their way. One man who was brought up in an office in those days was John Webb, and he was a pupil of Inigo Jones; he did not travel, and he never made any great reputation as an architect. I give you these examples to show the value of travel to an architect.

Mr. Colcutt has drawn attention to a programme of dividing architects into three grades: (1) the local practitioner, (2) the technical expert, (3) the designer. I cannot imagine anything more deadly. Just fancy a young and ambitious man starting out to become any one of those three! If he does not intend to become all three, he had better drop the idea of architecture. An architect, as I conceive, should have a general knowledge of everything connected with his building if he wants to be the master-craftsman. If you turn to Vitruvius, you will see he gave a much more exacting account of what an architect should be, and he almost appals you by the extent of the knowledge you are supposed to have.

With regard to the schools, beautiful drawings are very admirable, but they are not necessarily architec-

ture. That pupils should be taught to design large buildings I am sure is sound. They should also be taught to do the sort of buildings which are likely to come into the kind of work they will pursue. In the Architectural Association School, which is the one I know most about, I think the students are being trained on the right lines; they are doing excellent work, and they are given practical work to do. I have recently inspected designs for a printing works and for a recreation hall, and all the designs are well within the realm of what is usually required of a young architect who is beginning practice.

We must have been thrilled by Mr. Colcutt's remarks with regard to the Parthenon. He speaks of its rightness of size. I have not seen the Parthenon, but I have seen and studied St. Peter's, and there you feel that the size is not right; the scale of architraves and mouldings is so vast that the building loses the expression of dignity which you get in contemplating St. Paul's Cathedral.

In conclusion, I should like to add that while no school can make an architect, it can instruct and educate him. It conduces to good fellowship. It creates an *esprit de corps*, and I think we may rest satisfied that the students of to-day will be worthy exponents of the art of architecture in the future.

Prof. BERESFORD PITE [F.] : It is only due to Mr. Colcutt to say, at the outset, how much some of us have valued the extraordinary qualities of his early work. I do not know which design for Wakefield Town Hall Sir Aston Webb refers to, but I prefer the mediæval one. Mr. Colcutt made two. Whether he was directed to make the Renaissance one afterwards, or whether he made it from the outset, I do not know; but the two aspects displayed had a remarkable effect upon my mind as a student. And I remember the design for the Barrow-in-Furness Town Hall, another step in the same direction. And I think the Imperial Institute, in London, is one of the finest buildings of its era. I want to ask this: Were the conditions which produced the great men of Mr. Colcutt's early years so absolutely bad? Are the conditions under which we are conducting architectural education now producing similar men? That is the test. It is very interesting to take an academic view of the subject and discuss educational systems; but by their works you shall know them—it is by the fruits of a system of architectural education that the system must be judged. And I would suggest the great advisability, in these circumstances, of broader and longer views. If you review the progress of English building for the past century, beginning with the extraordinary academic and perfect work of the Greek school, then the enthusiastic work of the Italian school, represented by Sir Charles Barry, and the marvellous accomplishment of the Gothic school, I think you must hesitate before you denounce the methods by which such

results were arrived at, and sacrifice them in exchange for mere programmes of education. I think the time has come when this Institute can review the whole subject of architectural education with profit. Some fifteen years ago the Institute organised a conference on the then burning question of town planning; but I think the time is ripe for this Institute to organise a conference on the very important question of architectural education, and to review the courses which are adopted, not only at home, but abroad, in the study of our art. My impression is that we are running a risk of becoming too academical; we are not by nature as academical as the French. The Englishman is, after all, an extraordinarily free character; his genius has unexpected ways of exhibiting itself. It exhibited itself in a wholly unexpected way in Christopher Wren, in Pugin, and in many other brilliant workers we could name; and we should be a little careful in compelling upon the large number of schools in the country a uniform programme. The policy of the Institute, of late, has been to enlarge the liberty of these schools, and, I think, very wisely. It would be a good thing if it could enlarge that liberty still further and allow the schools freedom in the construction of practical programmes, not even specifying two years in an architect's office, but looking for the school, in the long run, to produce good buildings, and men who can do good buildings, because that, after all, is the test. From that point of view I welcome Mr. Colcutt's appearance on the field. We shall always judge him by his work, just as we always have enjoyed his presence and enjoyed his words. We shall mark the era as the Colcutt era, judging him by that evidence, whatever he may himself say.

And may I, in conclusion, say something about the course of architectural education? Ought it not to be this: the production of good buildings? Not a camouflage of interesting drawings. And are not our schools led astray at the present moment, just as our clients were led astray a generation or two ago by the perspectives—are not the schools led astray by the method of the Institute in requiring drawings of particular orders, and so limiting the activities of the schools in a dangerous way? Any review of their work at present will depress you by the universal sameness of the subject and the way in which it is treated. And so will a review of the competition drawings sent in for the Prix de Rome and the Gold Medal; they reveal a sameness of outlook which is un-English. And that points to the necessity of reviewing the whole work of the educational system at an early date. It will be welcomed by the schools. I cannot help adding that the recent Exhibition of American Architecture gives point to such a proposal. It is time that we reviewed our outlook. It was a very interesting exhibition, but it was selected from a continent; and if in connection with our Congress on Education here we could have a review, not of current

English architecture, but of English architecture covering the period from the much-despised but much underrated blessing, the 1851 Exhibition, to our own day, we should be able to judge exactly the trend of those forces which make for architectural progress.

May I add a suggestion with regard to the course of architectural education? I have suggested that the object of a drawing must be the production of a drawing which will guide a man in building. The next point is on the subject of architectural history. The one thing which is of importance to the designer is what the man was thinking about when he built, say, the Parthenon, or Westminster Abbey, or St. Paul's; not the impression made on my mind, not the impression made on the mind of a man who was not the architect. I remember Bodley saying to me that he always, when in Westminster Abbey, received the impression of how small man is, and when in St. Paul's how great a man is. Is it then really a matter of subjective psychology with the reverse influence on another type of mind? (Mr. Colcutt will excuse my pointing this out: he referred to the Theseum at Athens. It is a different size from the Parthenon, but it is of the same scale.) You may rack your brain to ascertain what the impression is; you might put it down to muddy colour, but you will not get at the essential facts until you ascertain what was operating from the calling, from the tradition, from the precedent, from the circumstances and the material, upon the man's mind when he did it.

I thank Mr. Colcutt for his Paper and for his buildings. Two doors off No. 36 Bloomsbury Square, in 1877, I was living in my father's home as an articulated pupil, and he will understand some of the wonder with which we looked at that building in our homely square.

Professor REILLY [*F.*] (Liverpool School): I feel that this is hardly an occasion for men of my, and a younger, generation. Mr. Colcutt's friends have paid the right kind of tribute to the Paper he has read. If I were to try to reply to Mr. Colcutt's remarks about the Liverpool School and the Association, I should probably alter the tone of this delightful meeting. My pleasure is in this: that I find the Association and the Liverpool School are in the pit together.

The speech to which I would rather address my remarks is Professor Pite's. I feel that he said some useful things. The real point about the schools, which have been a growth of less than twenty years, seems to be this: There was a tradition in English architecture down to the 'sixties and 'seventies of great enthusiasm, first the Neo-Grec tradition, and then the Gothic tradition. All the people lucky enough to be in offices in those times seem to have shared in the enthusiasm which was abundant and was firing every one. Those who, like myself, were in offices at a later period, the 'nineties, met with a vast variety of conflicting designs; no architect had a good word to say for the work of any other archi-

tect.¶ Therefore it seemed essential, if English architecture was to rise to the quality of the work of the greater men of the periods mentioned, that there should be some coming together of younger men in schools to find out for themselves, to study and see if knowledge could replace the faith which was lacking. I think that is what the schools can do. The schools serve not only in stimulating enthusiasm and knowledge, but they also act as a sieve. At the time I am speaking of, when I was receiving what education I had in architecture, one had to be articleed for five years. How then, if one was not suited to the profession, was one to get out of it? Only by sacrificing the articles. We now have an examination at the end of each year, when men are fired out who are not fit; so we are acting thereby as a means of saving the good men for the profession, and turning the bad men away. In my opinion, however, and in the opinion of every one who thinks of it, the schools are not there for the purpose of creating geniuses; geniuses arise; the Collcutts, if they are real geniuses, cannot be shut out. The schools raise the level of taste, and prevent blunders being made. If we walk about the streets in this neighbourhood, we see many blunders due to the men in the 'nineties; it is too early yet to judge of the work of the men educated in the last twenty years. I think some of you who visited Liverpool recently did see growing up in the town considerable evidence of the influence of the School. Sir Aston Webb has very wisely explained that to fire the imagination we have to put before students big schemes; we have to show them in big schemes the simplification of ideas a big scheme always involves, and that is why the big scheme is the best engine of education. Our main object is to educate architects. Many seem to think that the object is to provide cheap assistants, but that is the last thing which we hope to provide. Anyone who has seen the work of the schools of recent years, and not merely read their prospectuses, knows that construction is now carried out with unprecedented thoroughness. In each of the big schools one design in four is carried through to the working-drawing stage. While we have to fire the student's imagination on the one hand, we have to teach on the other the practical limitations of our craft. I maintain the leading schools are doing both with a success office training has never achieved, and could never from its scope hope to achieve.

Mr. W. N. ADAMS [A.]: May I say a few words on behalf of the students? Up to the present this evening we have heard everything from what we might say is the pre-war generation. Students are perfectly satisfied with their schools; they are quite satisfied up to the time of leaving their schools. But the students are not satisfied with the practising architects' offices which they go into. Excuse me, gentlemen, for speaking my mind, but Mr. Collcutt has done so, and I feel strongly on this point of architectural education. I feel that if

only practising architects would give students a real chance in their offices, London would be different.

Mr. HOWARD ROBERTSON, S.A.D.G. (Principal, A.A. School): I do not want to make many remarks, because the time is drawing to a close, and others have said, in a better way, things I wanted to say, as far as criticisms on Mr. Collcutt's paper are concerned. I think he makes one statement which is rather unfair to the schools. He says the schools are attracting people into the profession in enormous numbers. I have not seen figures showing that more are entering the profession since the schools were established than before. I think a number of people who previously entered offices are coming to the schools, and I should like to see some body, such as the Institute, find out how many more students are entering the profession. I think probably there are not more, and I think the men who are now coming in are very much better trained.

There is another point, and that is as regards discriminating among the students who come in. If you had a body of examiners judging students after two years, that body could not appreciate the student at his proper value, because he would not be in contact with him from every point of view—that of general education, the social side, and so on—for these make your impression of a man alter very considerably. Moreover, many men who are backward in the first two years develop surprisingly in the fourth or fifth year; and it is not fair to turn a man out until you are certain his career as an architect is not at all promising. I do not think you can prevent people entering the profession if they want to; if you turn them out of a good school, they will go to a bad one.

Then there is this question of backgrounds and skies and trees in drawings. Mr. Collcutt should come to the Association; he will see that that sort of thing is more or less washed out. I admit there was a reaction towards the excessive Beaux-Arts tendency in some of the schools. When reaction takes place you go to extremes. But that has been modified now, and we all realise that those things are merely accessories. The profession encourages pretty drawings, and they get into the Academy, and many people who decry pretty drawings come running to School-trained men when they want to win a competition. I have come into prominence regarding the gamekeeper's cottage. I saw a cottage like that in France, which was built on the edge of a lake, with water running under the terrace—not under the house. It was a charming cottage. I do not say the man whose work was illustrated has realised the original, but he did his best, and the gentleman who assessed it was a well-known man in the profession, and he thought it a very good drawing, in spite of what Mr. Collcutt has said. So opinions differ. And perhaps this man did not follow the examples in the Cots-

wolds because he had some regard for the laws of sanitation and hygiene.

The CHAIRMAN : We have had a most interesting evening, and I think that before I put the vote of thanks I must congratulate Mr. Colcutt upon his mental and physical energy in coming down and giving us this Paper to-night. We may not agree with all he has said, but at any rate the Paper has produced one of the most interesting discussions it has ever been my pleasure to hear in this room.

Mr. Robertson touched upon a point in his speech just now about the number of students in the recognised architectural schools in the United Kingdom. This afternoon I happened to see a return of the numbers, and, as far as this information goes, there are 884 students at the present time at the recognised architectural schools. If you add at least 400 or 500 articulated pupils in the various offices which are scattered about—and that is a very small estimate—and a similar number in the various polytechnic schools, that would make approximately 2,000 pupils studying architecture. I think therefore that as an Institute it behoves us to consider whether we are right in encouraging so many students to enter the profession at the present time, when the prospect of their making a living is so poor. But we do not want to touch on that gloomy side to-night. The whole Paper has been so very well discussed that anything I might add would be superfluous. Therefore I put to you a most hearty vote of thanks to Mr. Colcutt for his address.

Mr. COLCUTT, in reply, said : Thank you for your very cordial reception, and especially so because I have really spoken out.

There are one or two remarks I should like to make. First, I have had, until the last eight or nine years, the very greatest confidence in the Association schools—I know nothing of the other schools—and in what the Association was doing towards the education of the architect. As I said in my Paper, I would not take a pupil unless he had been one or two years at the Association schools, and I found that they were among the best pupils that I had. I thoroughly believed in what they were doing at that period. The student went into an architect's office. He had, or should have had, every opportunity for practical work. In my case, for instance, I rarely had more than one pupil at a time ; when I had two pupils I engaged the late Mr. Farrow to give lectures or lessons to the pupils in my office, in which the assistants took part. I was desirous that my pupils should learn something that I was not able to teach them. With the two years I advocate, the student could get all his practical knowledge, if he goes into a proper office. The very last pupil I had came into my office after a two years' training. He came on probation ; but I found him so good a man that I engaged him as an assistant practically at once.

Reviews

LABORATORIES, THEIR PLANNING AND FITTINGS. By Alan E. Munby, M.A., F.R.I.B.A. With Historical Introduction by Sir Arthur Shipley, O.B.E., etc. Lond. 1921. 25s. net. [Geo. Bell and Sons.]

I wish to make a personal acknowledgment to Mr. Munby. He has dispelled one of my prejudices. I used to think that no book on the construction of laboratories was of any use. And here is my reason. Laboratories are built as part of the necessary apparatus of the teacher of science. Science is progressive, her teachers are progressive, and consequently everything that belongs to the equipment of the teaching is progressive also. You never meet a professor of science in his own laboratory without hearing him say one of two things. He either says with pride and satisfaction, " This laboratory was built under my own direction, and the architect has carried out in it every device I could think of for simplifying the instruction I want to give (or the research I want to carry out)," or he announces that his laboratory was unhappily erected before his appointment, and that, though it was well enough suited to the rather old-fashioned needs of his predecessor, it is hopelessly out of date as regards the requirements of present-day knowledge.

It results from this that the work of the laboratory architect consists of a highly specialised collaboration with the expert or experts for whom the new building is being erected. And I personally know no more delightful experience in life than the exercise of compound ingenuity which such a collaboration affords. Incidentally it often rewards both architect and scientist with a new personal friendship and with a pleasant mutual insight into the life-work of another man.

The architect has in any case to throw himself wholeheartedly and quite humbly into the science man's problem, and has to absorb as far as in him lies some knowledge of the meaning of the scientific problems at issue. The scientist on his part ought to, and sometimes does, realise that the architect's view of architecture is worth respect. In any case, if the resultant building is not, when finished, a neat, unencumbered instrument of science, either the architect or the professor has failed.

Thus it comes about that an architect who has had any experience at all of laboratory work very seldom needs the advice of a book on the subject, for the very first beginnings of his work on any new enterprise of the kind consist not even in the looking up of his own office records, but in setting himself, without any prejudice whatsoever, to learn the mind of the scientific man who is destined to make use of the building.

Far be it from me to suggest that the architect's own suggestions, bred of his past experience, are valueless,

or that the architect's own will has no place in the matter. But his new laboratory has got to be the best ever made, and he must lose nothing of any new light which his scientific colleague can bring to bear on the problem.

Mr. Munby's book has, as I say, converted me. Not only will it be of use to young architects who may have no office records at their back, not only will it be of use to scientists who may learn a great deal from it in regulating their ideas on laboratory schemes, but I confess that after about thirty years of practice in this very class of work I have found a great deal of instruction, as well as interest, in the volume. It is very clearly written, very well illustrated, and may well claim to be looked on as authoritative, for Mr. Munby writes with experience of his own and with eagerness to accumulate the experience of others.

PAUL WATERHOUSE [P.R.I.B.A.].

THE DESIGNERS OF OUR BUILDINGS. *By L. Cope Cornford, with a foreword by William J. Locke. 5s. net. [R.I.B.A.]*

This excellent book is in effect a plea for greater recognition by the public of the architect as designer. That is also the gist of the foreword by Mr. W. J. Locke, who longs to see the Press intelligently informed about architecture and intelligently criticising new buildings as they arise, and not only criticising the buildings, but saying something about the architects who designed them. "Personality—still more personality—always personality—of the architect." The Press devotes many columns to painting and painters; why not also to buildings and their architects? Readers of the public prints can go to exhibitions of pictures and see at their ease under one roof the output of painters; but they would have to make many journeys to behold even a small proportion of the output of architects. They can see in their favourite papers observations on their favourite painters, but they receive no information, far less any guidance, as to the merits or demerits of new buildings. The Press could do much to remedy this omission, provided their writers on architecture were trained in the subject—that is, were architects with a gift of happy literary expression.

Having established the thesis that the public ought to know something about architecture, but does not; that architecture can only be produced by persons trained in the study of it—namely, by architects—Mr. Cornford proceeds to show that no profession has so good an organisation for the help of its members as architects have in the Royal Institute, and that the public have here an instrument of high efficiency would they but use it in seeking assistance and advice, more especially when the public is impersonated by the Government in its widespread activities connected with building.

As may well be supposed, Mr. Cornford has no difficulty in making out a good case for the Institute in its various aspects: as consultant, as adviser, as the regulator of competitions, as the ultimate authority on the education of architects, as the guardian of professional honour, and as possessing the finest library of architectural books in the world. He writes simply and clearly and with an understanding of his subject, for his early training was that of an architect. He has now transferred his allegiance to literature, and has therefore no interested motive in praising the Institute. He speaks as a layman to laymen, and it is sincerely to be hoped that his book may be widely read by the public who are concerned in any degree with building matters. It will give them a welcome insight into a subject upon which their notions are at present rather hazy. There are nine illustrations, all portraits of eminent architects, mostly reproduced from pictures in the National Portrait Gallery, and from the admirable series of portraits of past presidents preserved at the Institute.

J. A. GOTCH [F.].

SOME LIVERPOOL STREETS AND BUILDINGS IN 1921. *By C. H. Reilly, M.A., Roscoe Professor of Architecture, University of Liverpool. 3s. 6d. net. [Liverpool "Daily Post" Printers.]*

One puts down this little book with two regrets, the first in particular that Professor Reilly has not written more on this occasion, the second that generally as a writer his output has been so limited.

Paradoxical as it may appear, this book would have been better if it had been either shorter or longer.

The greater part consists of a series of articles, first published in the *Liverpool Post*, describing the streets and the architecture of Liverpool—and this part is all too short.

But as an introduction there is a reprint of a lecture the author gave the Liverpool Architectural Association, and it is this portion that might perhaps with advantage have been omitted; not because it is not as interesting as the remainder—it is intensely interesting and intensely provocative—but because it is written in a different key.

Here we are made to realise that it is as the Professor of Architecture of Liverpool University that the writer is addressing us; as he outlines his policy and thunders out his denunciations we are duly impressed, though perhaps a little rebellious.

But it is when we come to the articles that describe the city of his adoption that we are carried away. We no longer think of the author as a professor, as an architect, or even as a writer; he so captivates us by the interest of his subject and by the artistry of its presentation that he achieves the greatest triumph possible to a writer—he has made us forget the author in the subject.

As he conducts us from one part of Liverpool to another, sauntering with leisurely step up this important boulevard, pausing for a moment to make some illustrative comment on some particular building; rushing down this side-street, with a sudden halt to praise the lines of some architectural masterpiece, or with good-humoured mockery laughing at some terra-cotta absurdity, we feel that our author is in holiday mood—joyous, penetrative and illuminating.

It is in the inspiration of the moment that a man often utters the most profound truths, when he is so sunk in his subject that he has forgotten himself and his own special outlook; he speaks as the genius of the hour directs, and we unquestioningly accept what he says with happy confidence.

This small work is very far removed from a popular guide-book; it is something much more than that. Considered in its broadest aspect, it is a civic survey of Liverpool of infinite interest and value to layman and technician alike.

It is greatly to be hoped that other architects will follow Professor Reilly's example, and give us similar studies of the towns in which they live.

The work is urgently needed, and it is needed now. Architecture, more than most of the arts, suffers from a lack of qualified critics. Painting, the drama, music and literature all have an attendant train of able and expert critics, who inform and direct the lay mind and exert a very healthy influence on the exponents of these various arts.

Now it is the critical aspect of this book that makes it so outstanding, for Professor Reilly is nothing if not a critic, and a very able and informing critic at that. Not that all the criticism is of equal value; in particular, we very much regret the reference to the late E. A. Rickards which occurs in the introductory lecture. Professor Reilly quotes (he does not give it as his own opinion) some one as saying, in reply to a suggestion that it was a pity that Rickards never had an opportunity of designing a cinema or a theatre, that "Rickards never built anything but picture palaces." Now this remark, though perhaps superficially clever, is really very stupid and uncritical—stupid in that it showed no sense of what Rickards' work really was, and, incidentally, no sense of what the best kind of cinema work is.

Such a stricture only appeals to prejudice, to those who, alive to the formalistic and academic movement of the present time, can see nothing good in the work of the individualists who immediately preceded it, and whose generous fire gives a not unpleasant warmth after the chill received from much of the cold pedantic work that one sees to-day.

Rickards was a great individualist, but an individualist whose work had a monumental basis.

Now if, as one presumes the author of the remark

quoted intended, cinema work is showy and ephemeral, then to compare such work to Rickards was extremely foolish.

When one thinks of those strong masses with the heavily marked horizontal courses of stone in Rickards' buildings, as if each stone was laid to endure for centuries—in fact, of the whole spirit of his work—one is indeed amazed at such a comparison.

Possibly it is the Baroque influence reflected in these buildings which offends a certain indiscriminating type of modern; and about as much unthinking and prejudiced criticism has been applied to the Baroque as to Rickards.

The Italian Baroque, properly understood, was the wild protest of Italian artists when Spain had silenced all the free voices of Italy—when she had burned Bruno and stifled the Italian Church.

The Baroque may have become licentious in the reign of Louis XV. in its translated French forms—it may have even shown signs of this licentiousness in Wren's work during the reign of the Merry Monarch—but it was never licentious in this sense in Italy under the Spanish Domination.

There it was ever a heart-rending protest, and it is this wild note of beautiful protest that Rickards caught and sent forth as a challenge to all the shams and follies of his day, for Rickards' work, like the man himself, was essentially honest and essentially a protest.

STANLEY C. RAMSEY [F.].

SCULPTURE OF TO-DAY. By *Kineton Parkes*. *Volume I.: America, Great Britain, Japan. Volume II.: Continent of Europe.* 80, Lond. 1921. £1 5s. each volume. [Chapman and Hall, Ltd.]

Mr. Kineton Parkes has written a comprehensive review of modern sculpture, the first volume dealing with that of America, Great Britain, and Japan, and the second volume with that of the Continent of Europe.

The attempt to portray in a short essay the tendencies and aims of modern sculpture is a valiant one, and the measure of success will be the increased appreciation by the public of the best efforts of the sculptors. The education of the public is one of the aims of the critic, and by pointing out the qualities which the cultured taste of men of all ages has established as stable the critic is doing invaluable work.

The chief merit of any work of this nature is to be found in this direction; its influence on the public will in time react on the sculptor and tend to produce greater works of art. So far as this quality is concerned, the volumes under review are helpful, but only in a secondary way, the principal part being taken up with a series of biographical notices of modern sculptors, illustrated by several examples of their work. In addition, descriptive details are given of many works not illustrated; but these descriptions lack all enthu-

siasm of portrayal, and therefore leave the reader cold and unsympathetic to works which might in themselves have aroused appreciation and delight. The illustrations make the book popularly attractive, and this, perhaps, is one of the author's aims, and will help to awaken and foster public interest in a form of art which in England is rather neglected. This is all to the good, but a greater good might have been attained if the author had devoted more space to a critical analysis of the works selected for illustration and a restatement of the basic principles upon which all true art is founded.

The work covers a very wide range of modern sculpture, so wide that only a very superficial examination of its quality is possible, and for this survey the ordinary public should be grateful, as it may help them to go deeper into a matter which consciously or unconsciously influences their daily life.

Sculpture as it is applied to street architecture or to the decoration of cities in streets, squares, and gardens, is like architecture in this: it is always in evidence and cannot be ignored. Its effect, for good or ill, is always with us—pictures, books, and music, as a rule, we can escape at will, but these sculptures are factors in our daily development, and it is right that the qualities which are sound, stable, good, and beautiful should be pointed out for the benefit of the average observer, and his attention directed to the evanescent, false, and ugly which often appear in these works.

A habit of discrimination should be encouraged; comparative analysis should be insisted upon by the man in the street, and it should be the business of a writer of books of this nature to foster and encourage public development along these lines.

In these volumes there is perhaps too great a desire to provide a popular work, which is an easy thing to do, rather than to awaken the art student, the artist, and the public to the great underlying principles of all good art; but in so far as these volumes interest the worker and the public in sculpture they will be doing a necessary and beneficent work, and they are heartily welcome at this time, when the mind should be directed to the appreciation of beautiful things in contradistinction to the restless, unsettled and chaotic state from which the public at large now suffers.

J. S. GIBSON [*F.*].

THE UNIVERSITY OF LONDON.

The President and Mr. Arthur Keen have been appointed to represent the Royal Institute on the Architectural Education Committee of the University of London.

SANITARY INSPECTORS' EXAMINATION BOARD.

Mr. H. D. Searles-Wood has been reappointed to represent the Institute on the Board.

Correspondence

UNIFICATION AND REGISTRATION.

4 Raymond Buildings, Gray's Inn, W.C.
26 December 1921.

To the Editor, JOURNAL R.I.B.A.,—

SIR,—I find in your issue of 24 December another letter on Unification and Registration, in which we are told again that the Council of the R.I.B.A. approves of opening the doors of the Institute to "all architects of the United Kingdom," and the words are added: "without test or examination." The letter is signed by Mr. A. W. S. Cross and Mr. George Hubbard.

Leaving for the present the question whether anyone should publicly oppose the policy of the Council while holding the position of a Vice-President, I wish to point out once more that there is, and has been, no question of admitting any but qualified men. At the Council meeting on 23 May a report of nine printed pages, setting out Scheme A and Scheme B, was dealt with, and the following very brief resolution passed: "That the principle of Scheme A—namely, the bringing of all architects of the United Kingdom into membership of the R.I.B.A.—be adopted as the basis for Unification." (Scheme B was the Federation Scheme.) Scheme A refers throughout to "qualified" architects and to qualified architects only, and it provides for them to be placed in the class appropriate to their qualifications. Both signatories of the letter had this report, both of them understood the nature of the principle involved: is it "cricket" for them to endeavour to convey by means of the Press the impression that the R.I.B.A. proposes to admit without test or examination all who apply? The thing is, after all, almost too grotesque to be taken seriously. The writers of the letter know, and I now remind them of it, that it is proposed to set up a Board of Incorporation which shall be the sole judge of the qualifications of candidates. One welcomes sound criticism, but this criticism is neither sound nor ingenuous.

As for Registration, the writers of the letter are entitled to the opinions they hold on the probability of securing it, but they and all others may rest assured that we shall never get it unless we can go to Parliament with the solid backing of the whole profession.—Yours faithfully,

ARTHUR KEEN [*F.*],

Hon. Sec. Committee on Unification and Registration.

St. John's Wood, N.W.3.
27 December 1921.

To the Editor, JOURNAL R.I.B.A.,—

SIR,—I sympathise somewhat with Mr. R. G. Wilson, though I do not agree with him. He repeats what, one would think, was the obvious interpretation of the

Unification Committee's proposal to bring "all architects of the United Kingdom into membership with the R.I.B.A." and says that any method short of absorbing the whole profession would be futile. He probably represents a considerable body of opinion in conflict with the desire of Mr. Keen and others to discriminate between the "properly qualified" and those who are not—which, as Mr. Perks points out in his clear, direct way, means an end of Unification (within the Institute), even if it were not already otherwise impossible. I cannot think why Mr. Wilson is silent as to the import of Mr. Keen's letter. We all enjoy, like him, the advantage of being older than we were, and those of us with ideas differing from his may conceivably be none the less sane. We can certainly claim the right to think that if Registration is ever going to be effected, and if its object is really to destroy the bad or incompetent architect, there are sounder and probably more ethically proper means for attempting to do so than some which are, we understand, now being considered.

The sacrificial argument always has a good sound, particularly if it is connected with the improvement of architecture. When sincerely meant it will, indeed, always be entitled to and will receive respect. Mr. Wilson must, however, forgive me if I ask him on what grounds he would—in order to advance architecture now or in the future—obtain, if he could, assistance from those who, in Mr. Keen's words, have never imposed on themselves the restraint necessary to a professional man or "taken much trouble to qualify themselves for a profession which is also an art"; and also why he so readily concludes that willingness to combine with and confer unearned distinctions upon these gentlemen, "for the good of the cause" (as he puts it), is likely to "redound to our credit." He may, despite his own attempt at a bargain, be able to explain this and reconcile it, moreover, with ordinary fair-play, to those who obtained their membership by the regular, recognised means, thinking the Institute was what it professed to stand for. And, perhaps, there is a side to the "esprit de corps" aspect of the case that Mr. Wilson has not thought of.

I would further, if I may, beg him and others to read carefully the letter appearing in the current JOURNAL signed by Mr. Cross and Mr. Hubbard,* whose knowledge of every phase of this question, and of architectural affairs generally, entitles them to speak with a good deal of authority. Those who do so will see quite another view presented, and one which frees the subject from many of the ambiguities recently obscuring it. Perhaps Mr. Wilson will particularly consider the public case for Registration and whether there is really any serious prospect of a Bill being ultimately passed, on the only grounds likely to be considered by Parliament—assuming, too, that the sacrifices he is so anx-

* This letter was received too late for publication.

ious about are made by those who, at the present moment, see no obvious reason for making them. Maybe some day we shall hear why the "Dental" precedent, of a Register following the passing of a Bill, was considered unsuitable, though, as Mr. Perks shows, definitely recommended to the Committee. I suspect it may not have been unconnected with our lack of a "public case." Others also may develop a suspicion, if not more, that the "good of architecture" claim, now proceeding often from quite unexpected quarters, rests on a shallow foundation—if, indeed, it has substance at all. We may well cry out with Goethe, "Whither we are going who can tell—who, indeed, can now remember whence he came?"

I dislike architectural politics intensely. When, however, a vital principle is being threatened affecting a body that, for nearly a century, has stood for the encouragement of what is best in architecture, a definite duty falls on its members to contend for what they believe to be right. For, as Mr. Perks quite aptly says, mere numbers do not necessarily give value or strength to an Institute such as ours, and, in the eyes of some, numbers seem to be the beginning and the end of Unification.

FREDK. R. HIGGINS [F.].

1 Rutland Road, Hammersmith, W.

2 January 1922.

To the Editor, JOURNAL R.I.B.A.,—

SIR,—There is a story of an advocate who addressed a magistrate for an hour, and then, thinking he had become inattentive, asked if his worship had been able to follow him so far. "Yes," was the weary reply; "but I should turn round now if I felt sure I could find my way back."

That may be the feeling of many architects. The Institute in past years was told authoritatively there was no hope for a Registration Act. The R.I.B.A. Constitution League, quite recently, sought the best advice, and again learnt the impossibility of getting a private Bill of this kind through Parliament, public interests being already well protected.

Unify qualified architects by all fair means, but why go on dreaming about registration?—Yours truly,

A. O. COLLARD [F.].

Highbury Park, N.

9 January 1922.

To the Editor, JOURNAL R.I.B.A.,—

SIR,—As a member unaccustomed to take part in controversial matters, I have long wondered at the amount of energy and time dissipated over this Architects' Registration question. This view will probably be considered strange by the whole-hearted advocates of that policy, who seem to assume that all are in sympathy with the movement. To my knowledge this is not so. There are many members who, knowing full well that the chances of the attainment of Registration are practically nil, and content to take a neutral line

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so long as membership of the Institute remains more or less unaffected, might not in all circumstances remain so quiescent.

What has recently transpired shows the probability of wholesale additions to the membership of the Institute, which might entirely change its character. There seems to be no good reason for this. If a form of Registration must be attempted, cannot it be done without spoiling the Institute and stimulating opposition from those who see little or no value in it?—Yours faithfully,

C. B. GORDON [A.].

THE R.I.B.A. AND ARCHITECTURE IN THE DOMINIONS.

2 New Square, Lincoln's Inn, W.C.

31 December 1921.

To the Editor, JOURNAL R.I.B.A.,—

SIR,—In the JOURNAL for 26 November 1921 Professor Percy E. Nobbs, writing from Canada, and Mr. Edward H. Waugh, from South Africa, contribute some observations on the relationship of the Institute to architects and architecture in the Dominions. It would be of further interest if similar contributions may be expected from Australia and New Zealand. Both Professor Nobbs and Mr. Waugh, although they write on the subject of "Dominion Branches," do not seem to be so much concerned about what may, perhaps, be called the political aspect of the relationship between the R.I.B.A. and its Allied Societies, or members, in the Dominions. Professor Nobbs speaks expressly of ethical standards and of a national tradition in design. Mr. Waugh, in courteous and kindly terms, reminds us, with no little truth, of our architectural insularity, and invites a wider outlook which shall see the Empire as a whole so far as the arts are concerned. One suggestion made by the latter might be acted on: it is that contributions to the JOURNAL should be made periodically by men in each of the Dominions who are willing to support a proposal of this kind. Such an arrangement would, if made, keep us more definitely in touch with Oversea thought on architectural matters. And, if a suggestion is permissible, we might hope for a note from Professor Nobbs on the subject of architectural education. He may be willing to approach it as a matter concerning the maintenance, propagation, or cultivation of a truly British national, perhaps Imperial, tradition of design rather than as an affair of a crammed, cramming, and indigestible curriculum. Professor Leslie Wilkinson might also let us hear his ideas on the same or a kindred subject from an Australian point of view. And in future a regular contribution could be looked for in the JOURNAL during each succeeding year.

Would it not also be possible for the R.I.B.A. to respond to the obvious invitation to us here that we could and should do more to keep ourselves in touch with the Dominions, and them with us, in those things by which

thought in architecture is expressed? It would surely be well if this might be done, not alone by theories, dogmas, of design expressed by verbs, but rather with an interchange of exhibits indicating results. For there seems no real reason why, now, a regular periodical exhibition of works in architecture and the allied arts should not be held, by some means of co-operation, both here and overseas. The Art and the Literature Standing Committees might, respectively, be able to consider these points.

It may be that a special issue of the JOURNAL once or twice in the Session, as an Empire Number, could be made one way of beginning to meet the evident desire for a wider outlook and a broader sympathy.—Faithfully yours,

HUBERT C. CORLETTE [F.].

ARCHITECTURAL EDUCATION.

1 Woburn Square, W.C.1

20 December 1921.

To the Editor, JOURNAL R.I.B.A.,—

SIR,—The meeting last Monday was so full of interesting discussion and lasted so long that I could not, in fairness to the audience, add my contribution. I shall be glad, therefore, if you will kindly allow me to say here how much I enjoyed Mr. Colcutt's paper and to give a few points that occurred to me. The suggestion of a probationary period was the most generally discussed, and I think the idea is excellent if it would work. How many of us F.R.I.B.A.'s would have been turned down under such a test? Certainly many of the best men I know were considered rather "duffers" because they developed slowly, and some of the most brilliant of my contemporaries have been utter failures. All the speakers last night seemed to take it for granted that a man had wasted so many precious years if he studied architecture and did not become an architect. I have had many students at the Central School of Arts and Crafts and a few private pupils who, although possessing unusual abilities, would never make architects, and it has given me the greatest pleasure to find out what these men could do best and yet make use of their early training. Our best mural painters, sculptors, furniture designers, carvers, metalworkers, plasterers, etc., are architects or they have studied architecture. This cannot be a coincidence. One of the greatest defects of our present training is the neglect of materials. I do not think it is possible to make a man an architect by teaching him to lay bricks, neither is it by teaching him to draw; but an intimate knowledge of stone, timber, and metals is essential to produce a living tradition that can grapple with new conditions. One remark of Mr. Colcutt's I do not agree with—the suggestion that a superficial knowledge of steel construction is enough. Steel and concrete are already the very bones in many cases, and no doubt this system will grow in the near future.

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We have so much to learn that we cannot hope to become expert designers in these materials, but we must know enough to tell the engineers what we want. Otherwise we must take what the expert gives us, and the work of two men out of sympathy cannot be a work of art.—Yours faithfully,

S. B. C. CAULFIELD [F].

AMERICAN ARCHITECTURE.

*Wendover Road, Forest Hills Gardens,
Long Island, N.Y., U.S.A.
14 December 1921.*

To the Editor, JOURNAL R.I.B.A.,—

SIR,—Living near New York for over two years, may I add to Mr. H. Austen Hall's extremely interesting and instructive article in the JOURNAL for 26 November? The American Exhibition in London must have been of great interest to those who have never been here. "American architects are more successful in the handling of the larger problems of design than we in England," says Mr. Hall. He is right. Of this there is no question.

Compare the Pennsylvanian Railway Station and Boston Public Library (McKim, Mead and White) with several recent buildings within a short distance of Charing Cross. The comparison is very unfavourable to the work in London. Especially is this the case in regard to the detail. The station mentioned is an ideal conception of what a railway terminal ought to be. The same, however, cannot be said of the Grand Central Station. Although a masterpiece in planning, it cannot be compared with the former in regard to design. The Morgan Library is certainly a "gem," as Mr. Hall says, being perhaps the most perfect example in delicacy of detail of its kind, resembling the atmosphere of Chopin in a more solid form. The great care bestowed on the detail of many of the more notable public and semi-public buildings in this country is most marked. A careful note of these facts is well worth recording. I was particularly struck, when visiting the Boston Public Library, with the entasis on the columns of the arcade in the quadrangle. The proportions were perfect. Often with little or no ornament, and with great simplicity of detail, massive and imposing effects are produced in a manner almost unknown in England. Although the "loft" building or "skyscraper" may not create much feeling of restfulness or repose, the way in which many of these have been handled is very skilful, and one cannot help admiring the ingenuity and inventive faculties exercised in overcoming difficulties in their design and execution. Lord and Taylor's Store, Fifth Avenue, is a fine example of what a "department" store can be. What Mr. Hall says is again very true. Because a building is of large scale there is no reason why the detail should be coarse and unrefined. The detail of the stonework on the two lower floors of this building with balcony above would well repay a

visit to New York to anyone who contemplates the erection of a large structure of a similar nature in London or elsewhere. Many of the banks here would astonish most Britishers who have never seen an American banking institution—examples, again, of designs beautiful in detail and proportion. A notable addition to the Gothic style of architecture is to be found in New Haven, an old-fashioned university town.

The new Memorial Quadrangle at Yale University is a charming building, characterised by great skill in the handling of the stonework which is most effective. It is a fine example of modern Gothic. Generally speaking, however, not very much enthusiasm can be aroused for Gothic work here compared to English work of a similar nature. Of modern buildings in London the Roman Catholic Cathedral, Westminster, can worthily take its place with any building in America. Allow me again to endorse Mr. Hall's remarks when he refers to the "old Colonial style," in the development of which there is room for much scope, as evinced by numerous fine houses by Mr. Platt and others. The Southern Colonial style is especially charming, and numerous fine old examples still exist which can be adapted to the designs of the modern American house with delightful effect. Regarding domestic work, Mr. Hall again says that "England has long been supreme." Yes. The best types of modern domestic architecture in England still hold a unique position. There is a peculiar charm and fascination about the houses of Old England which has never been surpassed in any country. The Englishman still holds the field in domestic architecture.—Faithfully yours,

WILLIAM PATTERSON [L].

THE EXHIBITION OF AMERICAN ARCHITECTURE.

The Council have accorded votes of thanks to the American Institute of Architects for the loan of the drawings and photographs, to the Exhibition Committee for their organising work, to the Hanging Subcommittee (Messrs. W. H. Ward, H. M. Fletcher and H. C. Bradshaw) for the effective arrangement of the exhibits, to Mr. H. C. Bradshaw for the design of the poster, and to Mr. Cart de Lafontaine for writing the Foreword to the Catalogue and for his services in negotiating the loan of the Exhibition.

INSTITUTE OF INDUSTRIAL ADMINISTRATION.

A lecture will be given at the Great Hall of the London School of Economics on "Industrial Economics in relation to the bearing on National Welfare of the Ascertainment of Cost," by J. M. Fells, on Tuesday, 24 January. Sir William Pender will take the chair at 8 p.m. An invitation to attend the lecture is extended to members of the Institute.

Report on the Teaching of Construction

AT THE ÉCOLE NATIONALE ET SUPÉRIEURE DES BEAUX-ARTS

PRESENTED TO THE FRANCO-BRITISH ASSOCIATION OF ARCHITECTS

GENTLEMEN,—The important schools of architecture aim at training students capable of conceiving and some day erecting beautiful and individual works of architecture.

The purpose of our meeting is to communicate to each other the efforts which our two countries have made towards this end, and to assist each other in this educative task. We cannot sufficiently congratulate the promoters of this *rapprochement*, which will assuredly be fruitful in results. You have kindly communicated to us the programmes of your principal English schools of architecture, and in them we have found many interesting ideas and methods of realising them.

I think it is quite in accordance with the spirit of our meeting to-day to describe to you the attempt which we have this year made at the École des Beaux-Arts in Paris in the teaching of construction. But as this teaching is bound up with that of architectural composition, we must rapidly examine the operations which are required to enable us to create and erect a beautiful work of architecture which shall represent in the material sphere the true and realisable solution of a given programme.

What is the method followed at the École des Beaux-Arts for the attainment of this result?

Having thoroughly studied the programme, having mastered it, having examined not only the material conditions to which it is necessary to conform (the work must be adapted to its practical object), but also the theoretical conditions (the work must bear the character which is most perfectly appropriate); having classified the dominant, the secondary, and the accessory elements of the programme, the student, having thus grasped the true conception of the subject, finally takes up his pencil or charcoal.

By means of a number of sketches, mostly freehand work, which enable him more rapidly to embody his thoughts by making instinctive use of the interrelations between mind and senses, he endeavours to give form to his thoughts by appropriately suggestive lines, which he combines and proportions in conformity with the nature of the programme, and refines by successive tracings, striving to preserve in the entire work not only the character which he has conceived, but also a spirit of lucidity and unity.

He proceeds from the vague to the definite, from the general to the particular, from mass to detail, each point

to be solved at the proper time, each element of the programme placed with the emphasis and character suitable.

If his solution of the programme is true, and if the expression of it which he has found is correct and individual, he would obtain what we call a successful "*parti*."

This is, briefly, the work of composition as taught and practised in the ateliers of the school.

I do not think it is possible to improve on this method of teaching. It is for the student to turn it to the best account.

Its great superiority over the systems practised in other French or foreign schools is due to:—

1. The fact that it conforms to the law of all creative work.
2. The value of the teaching of professors and patrons of the ateliers, who are all masters of their art.
3. The advice and criticism of senior students, whom the juniors watch at work.
4. The rivalry between ateliers, which always stimulates effort towards improvement.
5. Finally, that atmosphere of artistic probity, impartial discussion, zeal, and mutual help, which prevails in the ateliers, and owing to which, in any competition, students take an interest in the design of their competitors and endeavour to impress an individual character on their own work.

But, however successful the solution of the programme may be in itself, it is of no use unless it is capable of execution, and unless its mode of construction also expresses truth.

The student must therefore know the materials which can be employed in the building, so as to choose them judiciously in conformity with the spirit of the programme; he must know the method of construction in use, the calculations of stresses; and, besides, he must know how to arrange methodically the numerous technical plants which were unknown in the past, which are required by modern practice, and which virtually transform certain portions of present-day buildings into small engineering centres.

A knowledge of science, no less than of art, is a necessity for the architect. If he knows little or nothing about it, his scope of expression must be considerably restricted. Schools must therefore train their students from the scientific as well as from the artistic point of view.

But whatever methods of construction may yet be discovered, however important may be the new services or devices required in future buildings, the school must never forget that art alone can create, whereas science is merely a means of control.

Even in the domain of science, when a master creates, it is his imagination—that is to say, the artist in him—which guides him. Having made his discovery, he will

then put it to a scientific test in order to ascertain whether or no it will live ; but his calculations must be based on something tangible, which belongs to the domain of creative art.

Every architect, therefore, must be an artist and a scientist.

But since his work must be capable of actual construction, his scientific knowledge must be applied even during the period of composition, although this belongs to the domain of pure art.

But in what manner must his scientific knowledge be applied ?

It is essential to define it here, because many schools are still in error, and can never produce students capable of achieving success.

During the period of composition the scientist must remain in the background, and yet always within reach of the artist, to remind him of material possibilities. The scientist must not at every moment wish to control what proceeds from the artist's brain : by so doing he would quickly clip the wings of inspiration. Above all, he must not take the lead : that would be disastrous. The mind of the artist must move in the realm of construction ; but in order to create, he must jealously preserve his liberty in combining units, placing them in proportion to their value, and seeking the most characteristic expression of the idea, without every moment looking to see whether what he is doing will or will not have to be modified by calculation. The scientist must for the moment only supply the instinctive selection of those forms which are capable of realisation with the materials available, and this until the solution of the problem is found. Only then will the scientist resume control with all mathematical checks. And if he has rightly exercised his rôle of informing the artist, without disturbing him, during the creative phase, the final result will not be modified by such control.

This solution, checked and drawn in detail, must, with a view to execution, be completed by means of specifications, priced quantities, estimates of cost, and tenders. Afterwards comes the realisation : execution of works, checking and settlement of accounts, etc., all these things being within the realm of experience and professional practice.

These are, in fact, the operations which the architect must follow methodically from the moment when he acquaints himself with the programme until the time when the work is completed.

We see his knowledge of construction brought into play :

1. At the outset, in the shape of instinctive guidance, during composition.
2. After the " Parti " has been settled, in the shape of scientific control.
3. From that moment up to the end, in the shape of practice and experience.

Is it possible in a school to impart all this knowledge, necessary as it is, and require of the student that he shall be master of it at the time of examination ? Assuredly not.

Time would not suffice, nor could the brain of the student grasp it all. To overload the student's memory will defeat its own object. Rather, his scientific and practical mind must be trained, just as his artistic mind is trained ; he must learn how to set out the conditions of a constructional problem, and how, by applying the principles governing any question, that question may be solved. By means of numerous illustrations he must be interested in matters of construction, endowed with the sense of construction, and supplied with numerous examples to guide him in his career. He should be made as capable of creation in the realm of science as he is in that of art, in order that he may overcome difficulties in his career by reference to his lectures, with the support of mature judgment and common sense.

The task is difficult, and the Franco-British Union of Architects must make it easier for us by communicating experiments which each of us can attempt in this direction.

Let us observe, in the first place, that the teaching of construction is based in equal parts on imagination, reinforced by practical and scientific knowledge, and on purely mathematical calculation which can only be applied to the product of imagination.

The École des Beaux-Arts has long since entrusted the teaching of this second section, which includes stresses and strains, to a fully qualified professor ; just as it has entrusted to specialists the teaching of mathematics, descriptive geometry, perspective, physics and chemistry, geology, etc., all subjects necessary to a proper scientific training.

There remains the teaching of practical construction. This may be divided into two parts :—

Before making the student acquainted with the use of materials according to recognised rules, and with the solution of the various structural problems which may arise, he ought to be made familiar with the nature, the qualities, and the defects of all the materials which he will have to use ; he must also be taught the recognised methods of jointing wood, iron and stone, comprised in the study of stereotomy ; and again he must learn the nature of such materials as plaster, lime, cement and the like, and the composition of mortars and concretes.

At the École des Beaux-Arts it is the Professor of Stereotomy who has charge of the first part of such teaching.

Being thus prepared by the various courses above referred to, and having passed all the requisite examinations, the student is admitted to the course which at the École des Beaux-Arts is called the construction course.

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It was during the delivery of this course that the experiment was made which I now beg to bring under your notice, and of which I had the honour to describe the principles to several of our English colleagues at the time of their last visit to Paris.

The object is to instruct the student without drudgery in all the parts of a building, all the ever-multiplying processes of construction : to set before him numerous practical examples, calculated to awaken his mind to structural matters and to imbue him with a sense of structure ; finally, to show him how work is executed, without the need of group visits to buildings in progress, visits which are difficult to arrange and often involve a disproportionate waste of time. This purpose dictated, more or less, the following method of instruction :—

1. The slow and often soporific dictation of the professor is exchanged for the rapid stimulating delivery of the lecturer.

2. Instead of diagrams slowly drawn on the blackboard by the professor, lantern slides are exhibited, so that in a course of forty lectures some 6,000 or 7,000 diagrams are shown and commented upon, instead of 400 or 500, and this without exhausting the student, who, having no notes to take, can devote all his attention to the subject under discussion.

3. The student is not obliged to take notes, but the whole of the lectures (both texts and diagrams) are printed for him to study at his leisure.

4. The student is required to devote a note-book to special sketches, kept up to date between the lectures.

5. At the oral examination he is only examined on a list of questions designated beforehand and dealing with fundamental principles.

6. He is required to produce a final design showing the application of his knowledge of construction.

In order that the course may be interesting and practical, all the known processes of construction and all the problems which may be met with in the erection of a building are dealt with in the exact sequence in which they occur during execution, from excavations and foundations to final completion, including painting and decoration.

Thus the student sees the continuous growth of the building, and can rapidly find in the printed lectures the answer to any question which may arise.

Generally speaking, when dealing with a definite subject, and whenever it is possible to do so, the construction problem is first set, together with all the conditions to which it must answer ; the theory of the various possibilities of such a problem is next laid down ; then the geometric drawings which are to solve the problem are thrown on the screen, with views of works either in course of execution or already completed.

In recapitulating the course of lectures a general survey is made of the methods used on a large building,

always observing the same sequence—the study of the programme, lantern slides of the geometric drawings which form its solution, and some 150 or 180 pictures covering the whole work from foundations to roof-tree.

The course of lectures also contains a quantity of supplementary information which is only touched on in the lecture room.

To enable the pupil to find his way amongst a rather voluminous set of papers, and in order that his attention may not be distracted from essential questions, he is at the very outset given a set of 90 questions which will be asked at the time of the examination, and each one of these questions is accompanied by the relative text and sketches which alone will have to be reproduced on the blackboard.

I must add that the printed course also contains rather elaborate information as to how to draw up specifications, bills of quantities, estimates, tenders, as well as how the work should be conducted, settlement of accounts, and architect's book-keeping. This part of the course, however, is not called for in the examination; for the time being at least it is but the embodiment of general information, with examples which will be invaluable for the student in the exercise of his profession.

The object of the book of sketches which the student will have to produce at the time of his examination (which sketches cover the various component parts of a building and connect the subjects specifically treated with the other constructional subjects) is to teach him how to express his thoughts in plan, section, elevation, or perspective (a language which he will have to use all through his professional life). And we also aim at teaching him better those fundamental questions which will be the subject matter of his final examination.

In order to obtain an honourable mention in construction and to pass from the Second to the First Class, the pupil, after successfully passing his oral examination, must further produce an important constructional design, demanding two and a half months of assiduous work. This is the crowning point of this course of instruction, showing the application of the student's technical and scientific knowledge to a large architectural scheme.

The author of an unsatisfactory design is relegated for another year.

Such, gentlemen, is the new *régime* which has been put to the test this year at the *École des Beaux-Arts* in connection with the teaching of construction.

It would be interesting to show you the results we have obtained, but after only one year of actual practice it would be imprudent to formulate a definite opinion. I must say, however, that I have been particularly and agreeably surprised at the interest shown by the pupils in matters of construction, at the remarkable work done by them, and at their success in the examinations.

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The final design—a large swimming pool with restaurant—led to really interesting and very variously treated constructional solutions, in which the pupils suggested, for the main work, the alternate use of steel, reinforced concrete, and masonry vaults. The details were quite appropriate to the subject.

These good results this year are attributable to the interest and earnestness of the students, due, no doubt, to the novelty of the subject, which is always attractive. Not for some years can we be sure of the actual results of this method of teaching. Whatever these may be, allow me to conclude by giving you my personal opinion.

Although science and constructional experience may be factors in the successful career of an architect, these should not be made the predominant object of the teaching in a school of architecture which aims at artistic distinction in its students.

The real quality and the superiority of the architect, howsoever great his attainments in construction, will always arise from his creative skill in architectural composition. It is in this direction that the greatest efforts should always be applied.

EDOUARD ARNAUD,
*Professor at the Central School of
Arts and Manufactures and at the
National and Higher School of Fine
Arts.*

BOARD OF ARCHITECTURAL EDUCATION.

STUDENTS' EVENING AT THE EXHIBITION OF PRIZE DRAWINGS.

The Board of Architectural Education have arranged to hold a special Students' Evening in connection with the Exhibition of Prize Drawings in the Galleries of the Royal Institute, on Wednesday, 25 January, at 8 p.m.

Students from the Architectural Schools and others are cordially invited to attend, and several professors and teachers will be present who will give information quite informally on different points of interest. No cards of admission are required. Light refreshments will be provided.

NEW "RECOGNISED SCHOOL."

On the recommendation of the Board of Architectural Education, the Degree Course of the Armstrong College, Newcastle, has been recognised, on the usual terms, as exempting from the R.I.B.A. Intermediate Examination.

ROYAL BRITISH COLONIAL SOCIETY OF ARCHITECTS.

Mr. W. E. Riley [F.] has been appointed by the Council as representative of the Institute in connection with the Royal British Colonial Society of Architects—not on the Council of that body, as stated in the last number of the JOURNAL.

THE R.A. SCHOOLS GOLD MEDALLIST.

Mr. Cyril A. Farey [A.], who has been awarded the 1921 Royal Academy Schools Gold Medal and Edward Stott Travelling Studentship of the Royal Academy, has thus crowned a career of distinguished studentship, apart from a successful practice as an architect.

Born in 1888, Mr. Farey was educated at Tonbridge School. His early training as an architect was obtained at the A.A. Schools and at the School of the Royal Academy. He was articled to Mr. Horace Field, and was afterwards assistant to Mr. Ernest Newton, R.A. He visited Italy four times between the years 1910 and 1920 in pursuit of his studies.

In students' competitions Mr. Farey has gained the following awards: Travelling Studentship, A.A. Schools, 4th year (1909); R.I.B.A. Measured Drawings, Hon. Men. (Hôtel Carnavalet) (1910); Royal Academy Schools Bronze Medal (1911); R.I.B.A. Tite Prize (1913); Soane Medallion (1914); R.A. Schools Gold Medal and Edward Stott Travelling Studentship (1921).

During the war Mr. Farey served for four years in the Army, and was demobilised in 1919 with the rank of Captain.

In open competitions Mr. Farey gained (in conjunction with Mr. Horace Field) the first premium in the Trevor Estate, Knightsbridge, Competition (1911); second premium in the *Country Life* Cottage Competition (1912), and also second premium in the same periodical's House Competition (1913); the first premium for the Civic Arts War Memorial Competition (1916); Bristol Housing, premiated and appointed one of the architects to design and carry out the scheme (1919); Leeds Departmental Store (second premium), 1920 (in conjunction with Mr. R. Frank Atkinson [F.]).

STREET ARCHITECTURE AWARD.

The following have been appointed by the Council to serve on the Jury which is to make the Annual Award for the best street frontage completed in London:—

Sir Aston Webb, President of the Royal Academy.

Mr. Paul Waterhouse, President of the R.I.B.A.

Sir Reginald Blomfield, R.A., Past President of the R.I.B.A.

Mr. E. Guy Dawber, Vice-President of the R.I.B.A.

The Rt. Hon. The Earl of Crawford and Balcarres, K.T., etc., Hon. Fellow of the R.I.B.A.

FINANCIAL SUPPORT TO SCIENTIFIC ORGANISATIONS.

The Council have voted subscriptions to the funds of the Empire Forestry Association and the British Engineering Standards Association.

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HIGHER BUILDINGS FOR LONDON.

The Council of the Institute have discussed the report of a Committee which has suggested the modification of the London County Council's Regulations so as to permit the erection of higher buildings in London.

After careful consideration of the whole subject the Council have arrived at the following conclusions:—

That any general increase in the height of buildings would be detrimental to the amenities of London.

That the powers possessed by the County Council of permitting an increase of height in particular cases are adequate and are exercised in a reasonable way.

That the open spaces and wide streets of London are of great value in securing the free circulation of air, and that their usefulness in this respect should not be impaired by permitting the erection of high buildings adjoining them.

That the principle of increasing housing accommodation by means of high buildings is a reactionary one, and undesirable from the point of view of family life.

That in the case of buildings which, in order to secure unity of design, are required to be of the height allowed by the Building Act the restriction of the height of the top floor to 60 feet in those of large cubical contents is no longer necessary or desirable in view of the methods of construction and fire attack now available.

R.I.B.A. CONFERENCE AT CARDIFF.

The Annual Provincial Conference of the Royal Institute of British Architects will be held on 9 and 10 June 1922 at Cardiff. The organisation of the Conference has been undertaken by the South Wales Institute of Architects, an Allied Society of the R.I.B.A.

Members are particularly requested to bear these dates in mind, and to endeavour to keep them free from other engagements so that they may be able to attend the Conference.

"THE DESIGNERS OF OUR BUILDINGS."

The Council have accorded a vote of thanks to Mr. L. Cope Cornford, the author of the recently published volume on the Royal Institute and its activities.

IRON PORTLAND CEMENT.

Mr. Richard B. Ling [*A.*] writes to ask if any member of the Institute in the Rotherham district can supply any further information on the following note:

"When passing through Rotherham, near Sheffield, in 1907, my attention was called to a small grinding plant by the side of a large disused slag tip close to the Parkgate Steel Works, and I was informed that a German firm had bought the slag at a small price and intended erecting a plant for the manufacture of Portland cement from this waste material, the grinding being the first part of the process."

PROFESSIONAL PRACTICE.

The following circular letter from a business firm having been brought to the attention of the Practice Committee, the Secretary of the Institute, on the Committee's recommendation, has communicated with the firm (whose name we withhold) as below:—

13 December 1921.

DEAR SIR,—I enclose a copy of a circular which has been sent out by your firm to architects. One of these circulars was received by a member of this Institute who has called our attention to it.

The circular was submitted to the Practice Standing Committee, and they have directed me to point out to you that the wording of the document is most undesirable, as it appears to suggest that architects should give work to the Company in the expectation of themselves being employed by the Company.

You are probably unaware that this is a proposal which no reputable architect would consider for a moment, it being entirely contrary to the code of professional conduct which members of this Institute make it a point of honour to observe.

Faithfully yours,

IAN MacALISTER

Secretary.

[*Enclosure.*]

ARCHITECTURAL DESIGN OF STRUCTURES.

DEAR SIR,—Owing to the increasing demand of our numerous clients, both at home and abroad, who want architectural treatment of various structures entrusted to us, we shall be glad to know your scale of fees, if you are willing to undertake such work.

Most of the structures designed by us, in order to be economical, efficient and permanent, are in reinforced concrete, although we do a large amount of structural steel designing. Reinforced concrete has been found to be most adaptable to architectural treatment.

On behalf of our clients, we decide on the best architectural design either by competition or direct appointment of a reliable architect known to us.

On the basis of mutual co-operation, could we also expect an opportunity of submitting our free design of the *structural* part of your client's proposed building or other structures? We shall be glad to help you in deciding for your client the most suitable and economical structure, either in reinforced concrete or steel. We are in a position to undertake the complete erection, and as such will supply you with estimate of cost and tender.

You need only send us your plans and full requirements, and we will do the rest.

Among the various structures now in erection, we may mention here the large construction works, . . . being carried out in the *exclusive design* of our Director. For this work we required the assistance of many architects, with whom we do mutual business as outlined above.—Assuring you of our best attention, we remain,

Yours faithfully,

LONDON BUILDING ACTS COMMITTEE.

On the recommendation of the Practice Standing Committee the Council have decided that the question of higher buildings for London should be made the subject of discussion at a General Meeting.

Architect's Liability and Insurance

The following communication has been received from Mr. Leonard Lait :—

Will you allow me, through the medium of the JOURNAL, to bring to the notice of members of the R.I.B.A. a scheme for the protection (by insurance) of architects against "Professional Liability" claims?

The scheme to which I refer is in no way "official," but members of the Practice Committee and other Standing Committees have been consulted, with a view to ensuring that it shall fully meet the requirements of members of the R.I.B.A. It was formulated several months ago, but was not put forward publicly at the time, as it was understood that proposals for dealing with this question by means of a "Defence Union," to be formed under the auspices of the R.I.B.A., were under consideration, and it was not desired to compete with any such official organisation.

I now understand, however, that no action on these lines is to be taken; and it will therefore be of interest to members of the R.I.B.A. to know that an alternative means of protection is available.

The risk against which protection is offered is principally that of a claim being brought against an architect by a dissatisfied client, owing to real or imaginary non-compliance with his instructions; or the development of defects in a completed building (for example, the appearance of dry-rot through the inadvertent use of infected timber, or the cracking of faience or decorative work through settlement of an addition to an old building), or damage to contents through alleged defective ventilation; in short, on any grounds on which an allegation of "neglect, default or error" might be founded.

Such cases, although comparatively infrequent, are apparently less so than is generally supposed (owing doubtless to the natural reluctance of the architect whose professional skill is impugned to ventilate the dispute publicly), and when they occur are apt to bear very heavily upon the victim, who must either pay up in silence or incur heavy expense in fighting (even if he wins) his case; in either event, he sustains a very severe loss.

The risk is, in fact, analogous to that of the destruction of one's house by fire; which risk is in the case of any given individual extremely remote, but which is so disastrous to the one on whom it falls, unless he is protected by insurance, that no one, for the sake of saving a small premium, would willingly take it upon himself.

Arrangements have been concluded with a leading syndicate of Lloyd's underwriters for the issue of a policy, to be known as the "Architect's Indemnity Policy," completely indemnifying the holder against "any claim which may arise from any act of neglect, default or error" on his part, including all expenses and legal charges arising therefrom; but it is provided that the assured shall in no case be compelled to contest any claim at law without his own consent, and this provision in no way affects his right of recovery from the underwriters.

The undertaking to issue this policy is conditional upon the production of evidence that the scheme would be likely to receive sufficient support to put it on a sound basis; and it is in order to ascertain whether such support would be forthcoming that I venture to ask for the publication of this letter.

To return to the analogy of fire insurance, no fire ever occurs that cannot be ascribed to "negligence" on the part of someone, but few would be so confident of their own ability to avoid such "negligence" as to forgo the safeguard of insurance.

Members of the Institute who are interested in this question should communicate with Mr. Leonard Lait at 3 Tokenhouse Buildings, King's Arms Yard, London, E.C.

Allied Societies

SHEFFIELD, SOUTH YORKSHIRE AND DISTRICT SOCIETY OF ARCHITECTS AND SURVEYORS.

Mr. C. B. Flockton (F.), in his presidential address at the opening meeting of the session of the Sheffield, South Yorkshire and District Society of Architects and Surveyors on 21 December, said :—

I shall refer to unemployment in the building and its allied trades principally. There is no doubt that unemployment at the present moment is a very grave trouble; but, like all the troubles of mankind, it is mostly of man's own making; and if man's trouble is of his own making, it may be properly assumed that its cure lies mostly in his own hands. An Act of Parliament is quite useless as a cure. It may alleviate, but it will never cure. In my opinion, the present unemployment in the building trade has mainly arisen because for some time past the trade has not given value for money received; and I am equally of opinion that unemployment will be reduced to a minimum as soon as all parties give value for money received, and not till then. It is customary to throw all the blame on the workman. This is untrue. I say all parties must give value for money received—the contractor, the manufacturer, the merchant, the skilled workman, the labourer. The three first named must be content with reasonable profit. I fully realise that times have been difficult. The unstable state of the market for materials and labour, the interference of politicians who cannot govern, but who will meddle, and other uncertain factors made it necessary for a contractor to cover himself against circumstances out of his control; but it ought now to be possible to remove most of these uncertainties and return to more normal conditions. If trade is to revive, builders must look for their profits from what they can save rather than from what they can make.

What is to be the workman's share in the revival? The first essential is that a serious and determined effort shall be made to counteract the pernicious doctrine that limiting output increases employment. The second essential is that workmen shall give value for wages received. It is customary to cry "Wages must come down!" "Wages must come down!" Why must they? If you say wages must come down or production must go up, I agree most fully; but the point I want to press most strongly upon both employer and employed is that if production or output, call it what you will, goes up to the present level of wages, there would be no need for wages to come down to the present level of output. If everybody doubled his output, the cost of everything would drop one-half, and everybody would be twice as well off, because the money he earned would buy twice as much.

There need be no fear of mopping up all the work in the building trade. Of my own certain knowledge, I can say that two years ago there were scores of thousands of pounds worth of building work ripe and ready for commencing. In many instances the working drawings were made; in some the quantities were got out ready for tendering. If that work had gone on, the trade in Sheffield would have been fully employed to-day and for many months to come, and so would the allied trades. All was stopped. Why? First, because of the instability and uncertainty of cost. Contracts for a fixed sum could not be obtained. Secondly, to the unsettled state of labour, which made it impossible to fix a time for completion. Consequently the building owner could not ascertain the expenditure to which he was committed, or how long his premises would be upset and his business crippled and inconvenienced by building operations. To-day the city is full of work, only waiting for reasonably stable prices and stable conditions of labour to be put in hand.

Waste, particularly municipal waste, is detrimental to our profession, and tends to produce unemployment in the building trades. High rates make it impossible to erect buildings to let at

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an economic rent, and they certainly deter occupying owners from enlarging and improving their premises, as they otherwise would do. The development of the city is obstructed, and the enlargement of the rateable value is stopped. Economy does not solely consist in the avoidance of expenditure; it equally lies in the expenditure of money wisely and profitably. A considerable amount of municipal expenditure must necessarily be directly unproductive; but if care and thought are exercised, much of the unproductive expenditure may be made to be very profitable indirectly. The great aim and object of a municipality should be to assist and encourage the increase of rateable value in every way it can, because that is the best way to bring the rates down; and the greatest care should be taken to avoid any scheme which tends to obstruct the development of rateable value or to reduce it.

THE ROYAL INSTITUTE OF THE ARCHITECTS OF IRELAND.

At the annual general meeting of the Royal Institute of the Architects of Ireland, held at Dublin, on 15 December 1921—the President, Mr. Lucius O'Callaghan, F.R.I.A.I., referred to the recent death of the oldest member of the Institute, Mr. George C. Ashlin.

The Hon. Secretary (Mr. H. Allberry, F.R.I.A.I.) read the report of the Council for the past session, from which the following extracts are taken:—

Registration.

"Probably the subject of the greatest importance to the architectural profession which the British Institute have at present under consideration is that of unification and registration, and your President was again nominated to the Unification Committee, which on 12 May passed the following resolutions:

"That the principle of bringing all the architects of the United Kingdom into membership of the Royal Institute of British Architects be adopted as the basis for unification."

"That the committee recommend the Royal Institute to draft such alterations to its Charter and by-laws as may be necessary to comply with this principle, and to confer with the Council of the Society of Architects as to conditions of membership."

"These resolutions were adopted by the Council of the British Institute, and the outlines of an agreement between that body and the Society of Architects have been drafted for consideration, and at present lie with the respective Councils. Your Council have hitherto refrained from expressing any views on the proposals generally pending receipt and consideration of the draft scheme, as they are of opinion that it would be undesirable to bind this Institute to any defined policy during the present period of flux."

Education.

The report states that in April last a committee was appointed to inquire into the facilities existing for the education of students of architecture, and to prepare a report with recommendations as to methods which may be considered necessary for improving the present condition of architectural education in this country. The report of this committee was submitted to the Council in September, and, with some slight amendments, circulated to all members of the Institute in October.

"At the general meeting in November the report was discussed, and the following resolution was unanimously passed: 'That this meeting desires to thank the committee for having prepared such a valuable report, and considers that, as the question of architectural education is one of the greatest importance to the profession and the public, the Council should proceed immediately on the lines indicated in the report.'"

Advertisements and Sky-signs.

"The attention of the Council having been called to the possibility that advertisements would be placed upon the Loop

Line Bridge, the matter was referred to the Arts Committee, which reported as follows:—

"The Committee are of opinion that the Council should memorialise the Corporation of the city of Dublin, the Dublin and South-Eastern Railway Company, and other bodies holding authority in the matter, with a view of preventing the bridge being used for the purpose of advertisements."

"If the erection of advertisements be permitted, the result must be the accentuation of an eyesore, and the underlining of an act of vandalism in the past."

"The Committee welcomed the action of the Corporation in obtaining power under the Dublin Reconstruction Act to control the erection of sky-signs and advertisements on new buildings in the destroyed area, an action which leads the Committee to hope that the Corporation will take steps to prevent the vulgarisation of the Loop Line Bridge, or any other railway bridge in Dublin, by the erection of advertisements thereon."

Ulster Parliament.

With reference to the Treasury's action in connection with the designs for the proposed Parliament buildings for Northern Ireland, the report says:—

"Your Council regret that the subject was not brought to their knowledge at an earlier date, so that some effective action could have been taken in a matter of such great importance to the Irish architectural profession. An extraordinary feature presents itself throughout the whole of the proceedings—viz., that although the Royal Institute of the Architects of Ireland functions for the whole of Ireland, and might be presumed to be in a position to offer the soundest advice on the most efficient means of obtaining designs for these public buildings, neither the First Commissioner nor the Council of the Royal Institute of British Architects made the slightest effort to ascertain their considered views on the subject."

In conclusion reference is made to the compulsory retirement of Mr. Sheridan, hon. treasurer, to the appointment of Mr. Allberry as Deputy Principal Architect to the Office of Works, Ireland, and to the election of Mr. G. F. Beckett and Mr. S. M. Ashlin as hon. secretary and hon. treasurer for the next three years.

Architects' Benevolent Society.

The President, in moving the adoption of the report, called particular attention to the assistance that had recently been given to cases of distress by the Architects' Benevolent Society, and impressed upon the members the need for supporting this useful organisation.

The report was unanimously adopted.

The Institute Bye-Laws

Amendments approved by the Privy Council.

Notice has been received from the Privy Council as follows:—

AT THE COUNCIL CHAMBER, WHITEHALL,

THE 13TH DAY OF DECEMBER, 1921.

BY THE LORDS OF HIS MAJESTY'S MOST HONOURABLE PRIVY COUNCIL.

WHEREAS there was this day read at the Board a letter dated the 23rd November, 1921, from Messrs. Markby Stewart and Company transmitting certain Resolutions varying Bye-laws Nos. 4, 63, and rescinding Bye-law No. 16 of the Royal Institute of British Architects passed at a Special General Meeting of the said Institute held on the 7th day of November, 1921, and confirmed at a subsequent Special General Meeting of the said Institute held on the 21st day of November, 1921:

And whereas by Article 33 of the Charter of Incorporation

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of the said Institute it is provided that no Bye-laws shall be of any force or validity whatever unless and until they have been approved by the Lords of the Council :

NOW, THEREFORE, Their Lordships, having taken the amendments of the said Bye-laws into consideration, are pleased to allow the same as set forth in the Schedule to this Order.

Almeric FitzRoy.

SCHEDULE.

AMENDMENTS OF THE BYE-LAWS OF THE ROYAL INSTITUTE OF BRITISH ARCHITECTS.

Bye-law 4.—To be amended by the addition of the following words "The number of members in the Class of Honorary Associates must not exceed sixty."

Bye-law 16.—To be rescinded.

Bye-law 63.—To be amended by the addition of the following words "or in the election of the Council and Standing Committees."

Bye-law No. 4 will therefore now read as follows :—

4. Every nomination of a candidate as Honorary Associate must state his Christian name, surname, and place of residence, and must be subscribed by him and by at least three Fellows who shall certify their personal knowledge of him. *The number of members in the Class of Honorary Associates must not exceed sixty.*

Bye-law No. 16 now rescinded :—

Any Fellow who has retired from practice may, on his request, by Resolution of the Council, be transferred without election or entrance contribution to the Class of Honorary Associates. In the Register of Honorary Associates the names of such transferred Fellows shall be printed in italics.

Bye-law No. 63 will now read as follows :—

63. No Honorary Associate shall be entitled to vote in the election of any candidate for admission to the Royal Institute, or on any professional question, *or in the election of the Council and Standing Committees.*

The additions to the amended Bye-laws Nos. 4 and 63 are printed in italics.

Competitions

AUCKLAND WAR MEMORIAL COMPETITION.

The following cablegram has been received by the Secretary of the R.I.B.A. from the Mayor of Auckland :

"Letter November Fourteen received. Advise Competitors wait answers numerous questions in mail due London end of month.—MAYOR."

THE TOTTENHAM WAR MEMORIAL COMPETITION.

The Council endorsed the issue of the veto in regard to this competition.

IN NEGOTIATION.

MALVERN PUBLIC BATHS COMPETITION AND

TRURO WAR MEMORIAL COMPETITION.

The Competitions Committee desire to call the attention of Members and Licentiates to the fact that the

conditions of the above competitions are unsatisfactory. The Competitions Committee are in negotiation with the promoters in the hope of securing an amendment. In the meantime Members and Licentiates are advised to take no part in these competitions.

The Competitions Committee are also in negotiation with the promoters of the following competitions :—
Seaford Recreation Ground, Dundee War Memorial, and Kirkwall War Memorial.

COMPETITIONS OPEN.

Auckland War Memorial. Kirkcaldy War Memorial.

The conditions and other documents relating to the above competitions may be consulted in the Library.

Examinations

FINAL AND SPECIAL WAR EXAMINATIONS.

ALTERNATIVE PROBLEMS IN DESIGN.

The Board of Architectural Education announce that the designs submitted by the following students who are qualifying for the Final and Special War Examinations have been approved :—

Subject LIX.

(A) *Design for a City Square with Colonnade.*

Clark : R. J. B.	Jenson : A. G.
King : W.	Knewstubb : F. W.
Reid : A. S.	Ryle : W. (Miss)
Sugden : H. D.	

Designs for various other subjects submitted by the following students have also been approved :—

Burge : B.	Conlan : J. N. P.
Dent : A. R.	Hutton : C. H.
Reid : A. S.	Shroff : L. F.

THE SPECIAL WAR EXAMINATION.

The Special War Examination (for Students whose studies had been interrupted by the war) was held in London and Liverpool from 12 to 16 December 1921. Of the 144 candidates admitted 106 passed and 38 were relegated.

The successful candidates are as follows :—

ALLEN : JOSEPH STANLEY, 38 Grange Road West, Birkenhead.
ALLISON : FREDERICK WILLIAM HARFORTH, 11 Lynton Gardens, Harrogate.
ALLSFORD : ERNEST HAROLD, 56 Ovington Street, Chelsea, S.W.
ANDREWS : CYRIL DOUGLAS, 222 High Street, Ponders End, Middlesex.
BARNARD : HAROLD THOMAS BENJAMIN, 82 Victoria Street, S.W.
BARTLETT : PERCY JAMES, 3 Mead Way, Sea Mills Park, Bristol.
BRANLEY : ALBERT, 1 Sandringham Road, Sneinton, Nottingham.

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- BEAUMONT: EUGENE EDWARD, 18 Manor Road, Sidcup.
 BECK: HENRY BERKELEY, 5 Meyrick Road, Stafford.
 BLOOMFIELD: EDWARD HAMILTON, 50 Tantallon Road, Balham, S.W.
 BLOOMFIELD: HENRY LANCELOT, 11 Rothesay Road, Luton.
 BOWRING: JOHN VALENTINE, 193A Broadway, Southend-on-Sea.
 BRANSON: PERCY KENNETH, 123 St. Saviour's Road, Leicester.
 BROOKS: LESLIE CLIFFORD, 297 Broad Street, Birmingham.
 BROWN: FRANK COLLIN, 14 Dartmouth Park Road, N.W.5.
 BROWN: GEORGE TALBOT, 51 Fawcett Street, Sunderland.
 BUMPSTEAD: ALBERT DENNIS, 70 Heath Gardens, Twickenham.
 BURNETT: EDGAR, Weir House, Hickling, Melton Mowbray.
 BURNETT: FREDERICK WANDLASS, 23 Windsor Terrace, Penarth, Glamorgan.
 BYROM: RICHARD, 221 Tottington Road, Elton, Bury, Lancs.
 CARTER: WILLIAM, 5 Mutton Street, Sunderland.
 CHALLICE: JOHN, 25 Pennsylvania Road, Exeter.
 CHECKLEY: GEORGE, 23 Parkbridge Road, Prenton, Cheshire.
 CHEEK: ALFRED CYRIL, c/o Messrs. Seale and Riley, 25 Horsefair Street, Leicester.
 CLARK: HAROLD GOUNDRY, 35 Dartmouth Park Road, N.W.5.
 CLARK: SIDNEY CHARLES, 3 Ronald Park Avenue, Westcliff-on-Sea, Essex.
 COOSWELL: VICTOR GORDON, "Sunnycote," London Road, North End, Portsmouth.
 COLE: ERIC, 31 Promenade, Cheltenham.
 COOK: HERBERT JAMES, School House, Ryhope, Sunderland.
 CORDINGLEY: REGINALD ANNANDALE, 11 Irlam Road, Sale, Cheshire.
 COTTON: GILBERT HENRY, 60 Regent's Park Road, N.W.1.
 COUCHMAN: HAROLD WILLIAM, Mount Pleasant House, Tottenham, N.
 COWTAN: ALBERT CHARLES, "Elm Way," Eastfields Road, Acton, W.3.
 CREEGAN: EDGAR WILSON, 23A Golders Way, Golders Green, N.W.11.
 DAVIES: HAROLD HINCHCLIFFE, 14 North John Street, Liverpool.
 DETMOLD: FREDERICK GUY, 100 Redcliff Gardens, S.W.10.
 EDWARDS: WILFRID BYTHELL, Victoria Villa, Flint, North Wales.
 FIELDER: GEORGE HAROLD, 55 Broxholm Road, West Norwood, S.E.27.
 GRANGER: WILLIAM FRASER, 8 New Square, Lincoln's Inn, W.C.2.
 GREENWOOD: JAMES HENRY, 13 Water Lane, Brixton Hill, S.W.
 GRIFFITH: HUGH NICHOLAS, 31 Tithebarn Road, Southport.
 GUY: WALDO E., Elmtree Cottage, Quickley Lane, Chorley Wood, Herts.
 HAIRD: TOM WILLIAM, 56 Wilberforce Road, Leicester.
 HALLIDAY: FRANKLYN LESLIE, 14 John Dalton Street, Manchester.
 HARDIE: JOHN STEWART, 5 Fourth Avenue, Prescott Road, Old Swan, Liverpool.
 HARDING: FRED HAROLD, 54 Knighton Fields Road, Leicester.
 HARBOLD: FRED, 57A High Street, Totnes, S. Devon.
 HAUGHAN: JOHN HOLLIDAY, The Grey House, Silloth, Cumberland.
 HAYWARD: JOHN HAROLD, 60 Grant Street, Glasgow.
 HAYWOOD: ALGAR ARTHUR NEWTON, 15 Farm Street, Mayfair, W.1.
 HEARD: GORDON THOMAS, Elbro House, Princess Road, Buckhurst Hill, Essex.
 HOLLIDAY: ALBERT CLIFFORD, School of Architecture University of Liverpool, Liverpool.
 HOWELLS: DAVID JOHN, "Bryn Hywel," Clase Road, Morrisston, Swansea.
 HUNT: REGINALD, "The Homestead," Sunningwell Road, Oxford.
 HUNTER: HARRY CORNELIUS, "West View," Hadley Road, New Barnet, Herts.
 JACKSON: HAROLD THOMAS, 52 Cartwright Gardens, W.C.1.
 JOHNSON: CAMPBELL McALPIN CAMERON, "Monteith," Stroud Road, Gloucester.
 JONES: REGINALD HERBERT ANDREWS, 18 Broughton Road, West Ealing, W.13.
 JONES: RONALD HUGH, 3 Gnoil Avenue, Neath, S. Wales.
 JONES: TOM LEONARD, "Tiryddail," Alma Street, Newport, Mon.
 KEESEY: WALTER MONCKTON, M.C., A.R.C.A., 44 Rusholme Road, Putney Hill, S.W.
 KIRBY: EDWARD, c/o 151 Alexandra Road, Wellingborough.
 KNOTT: ALBERT LESLIE, 1 St. Gabriel's Road, Cricklewood, N.W.2.
 LANGDELL: GEORGE ARTHUR, 23 Westcroft Square, Ravenscourt Park, W.6.
 LAVENDER: EDWARD PRICE, Stifford Rectory, near Grays, Essex.
 LAY: ARTHUR PURCELL, 149 Upper Richmond Road, Putney, S.W.
 LEATHART: JULIAN RUDOLPH, 8 New Square, Lincoln's Inn, W.C.2.
 LEWIS: GEORGE STANLEY, 4 Ninth Avenue, Old Swan, Liverpool.
 LUKE: REGINALD LATHAM, 72 Oxford Street, W.1.
 MACKAY: NICHOLAS CHARLES, c/o Architectural Association, 35 Bedford Square, W.C.1.
 McLEAVY: GEORGE EDWARD, 34-5 Bedford Square, W.C.1.
 MAHON: SIDNEY EDWARD, 74 Cambridge Road, Great Crosby, Liverpool.
 MARTIN: NATHANIEL, 158 High Street, Gorleston-on-Sea, Great Yarmouth.
 MASEY: RICHARD JAMES, 20A Maple Road, Anerley, S.E.20.
 MEAGER: KILDARE STUCLEY, 28 Redcliffe Square, S.W.
 MILLER: CLAUDE ST. JOHN GARLE, 8K Bickenhall Mansions, Gloucester Place, W.1.
 MINTY: ROBERT JAMES HUGH, 35 Craven Street, W.C.2.
 MITCHELL: EDWARD ARNOLD, Grove End, Harrow-on-the-Hill.
 NEWTON: PERCY MAURICE, 10 Berkeley Street, Hull.
 NORTON: CHARLES JOSEPH, 1 Bridge Avenue, Hanmersmith, W.6.
 OWEN: ARTHUR TREVOR, "Myrtle Bank," Dalmorton Road, New Brighton, Cheshire.
 OWEN: GEOFFREY LEYLAND, 23 Harrowby Road, Seaforth, Liverpool.
 PENMAN: EDWARD MEADOWS, 1 Thorpewood Avenue, Sydenham, S.E.26.
 PRICE: HARRY JAMES PARKIN, 19 Eastholm, Golders Green, N.W.11.
 PRICHARD: LIONEL ARTHUR GEORGE, 17 Sixth Avenue, Old Swan, Liverpool.
 REES: VERNER OWEN, 32 Blandford Road, Bedford Park, N.4.
 REEVES: JOHN EDWARD, 158 Waterloo Road, Smethwick, Birmingham.
 REVITT: GEORGE, Architects' Department, County Offices, Derby.
 RIPPINGHAM: THOMAS FRANCIS, 42 Upper Manor Street, Chelsea, S.W.
 SADLER: WILLIAM, 41 Thornhill Road, N.1.
 SAMPLE: EDWARD FREDRICK RONALD, 38 Grosvenor Terrace, York.
 SCRIVEN: CHARLES, 51A Alexandra Road, South Hampstead, N.W.8.
 SEATON: WILLIAM GEORGE, 22 Mackintosh Road, Pontypridd, Glam.
 SMITH: ALFRED EDWARD, 48 Tyndale Street, Leicester.
 SMITH: CECIL, 17 Winchester Avenue, Brondesbury, N.W.6.
 STURGEON: JOHN HENRY, 34 Bedford Square, W.C.1.
 SUTCLIFFE: THOMAS WILFRID, 22 Edmund Street, Rochdale.
 THORNTON: RICHARD, 200 Portisdown Road, Maida Vale, W.9.

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TOWNSEND : ARTHUR CECIL, 7 Rawlins Street, Fairfield, Liverpool.
 TRIMM : CHARLES ALGERNON, "Fittor," 22 Lower King's Road, Kingston-upon-Thames.
 VON BERG : WILFRED CLEMENT, 113 Rue d'Arras, St. Omer, Pas-de-Calais, France.
 WALKER : REGINALD BECKWICK, 28 Chichele Road, Cricklewood, N.W.2.
 WHITE : CHARLES STANLEY, 34 Bedford Square, W.C.1.
 WILLIAMS : EDWIN, 201 Edge Lane, Liverpool.
 WILLIAMS : HOWARD, "Cartref," 37 Kimberley Road, Roath Park, Cardiff.
 WINN : THOMAS JOHN ROSEWARNE, Trevone, Truro, Cornwall.

The following candidates passed the examinations held in Sydney, N.S.W. :—

INTERMEDIATE.

HURD : SAMUEL JAMES, 55 Pitt Street, Redfern, Sydney, N.S.W.
 TRAILL : STUART JOHN, Hastings Road, Turramurra, Sydney, N.S.W.

SPECIAL OVERSEAS.

WHITLEY : CUTHBERT CLAUDE MORTIER, 37 Harold Street, Hawthorne, Melbourne, Victoria.

SPECIAL WAR.

ROBERTSON : ALEXANDER SMEATON, 456 St. Kilda Road, Melbourne, Victoria.

Three candidates were relegated in the Special War Examination.

Notices

ELECTION OF MEMBERS, 6 MARCH 1922.

The following applications for election have been received. Notice of any objection or other communication respecting the candidates must be sent to the Secretary for submission to the Council prior to Monday, 6 February 1922.

[See also list published 26 November 1921.]

AS FELLOWS (6).

LENTON : FREDERICK JAMES, M.C. [A. 1912], 16 Broad Street, Stamford ; 36 Scotgate, Stamford.
 PICTOR : ARTHUR JOHN [A. 1894], 14 Queen Square, Bath ; Bruton, Somerset.
 THOMAS : PERCY EDWARD, O.B.E. [A. 1920], 6 and 7 St. John's Square, Cardiff ; Dene Lodge, Cathedral Road, Cardiff.
 TRAYLEN : HENRY FRANCIS [A. 1899], 16 Broad Street, Stamford ; 24 St. Martin's, Stamford.
 WALKER : JOHN WILSON [A. 1905], 375 Union Street, Aberdeen ; "Kilreen," Stonehaven, Kincardineshire.
 WILSON : ROBERT GORDON, Junr. [A. 1902], 375 Union Street, Aberdeen ; 116 Queen's Road, Aberdeen.

AS ASSOCIATES (83).

ALLEN : JOSEPH STANLEY [Special War Examination], 38 Grange Road West, Birkenhead.
 ALLISON : FREDERICK WILLIAM HARFORTH [Special War Examination], 11 Lynton Gardens, Harrogate.
 ALLSFORD : ERNEST HAROLD [Special War Examination], 43 Kingswood Avenue, Brondesbury Park, N.W.6.
 BARNARD : HAROLD THOMAS BENJAMIN [Special War Examination], 82 Victoria Street, S.W.1.

BARTLETT : PERCY JAMES [Special War Examination], 3 Mead Way, Sea Mills Park, Bristol.
 BEASLEY : ALBERT [Special War Examination], 1 Sandringham Road, Sneinton, Nottingham.
 BEAUMONT : EUGENE EDWARD [Special War Examination], 18 Manor Road, Sidcup, Kent.
 BECK : HENRY BERKELEY [Special War Examination], 5 Meyrick Road, Stafford.
 BLOOMFIELD : EDWARD HAMILTON [Special War Examination], 50 Tantallon Road, Balham, S.W.
 BLOOMFIELD : HENRY LANCELOT [Special War Examination], 11 Rothesay Road, Luton.
 BOWRING : JOHN VALENTINE [Special War Examination], "Woodlands," Eastwood, Leigh-on-Sea, Essex.
 BRANSON : PERCY KENNETH [Special War Examination], 123 St. Saviour's Road, Leicester.
 BROOKS : LESLIE CLIFFORD [Special War Examination], 66 Greencroft Gardens, Hampstead, N.W.6.
 BROWN : FRANK COLLIN [Special War Examination], 14 Dartmouth Park Road, N.W.5.
 BROWN : GEORGE TALBOT [Special War Examination], 51 Fawcett Street, Sunderland.
 BUMPSTAD : ALBERT DENNIS, P.A.S.I. [Special War Examination], 70 Heath Gardens, Twickenham, Middlesex.
 BURNETT : EDGAR [Special War Examination], Weir House, Hickling, Melton Mowbray.
 BURNETT : FREDERICK WANDLASS, M.C. [Special War Examination], 23 Windsor Terrace, Penarth, Glam.
 BYROM : RICHARD [Special War Examination], 221 Tottington Road, Elton, Bury, Lancs.
 CARTER : WILLIAM [Special War Examination], 5 Murton Street, Sunderland.
 CHALLICE : JOHN [Special War Examination], 7 Bedford Circus, Exeter.
 CHECKLEY : GEORGE [Special War Examination], 23 Park-bridge Road, Prenton, Cheshire.
 CLARK : SIDNEY CHARLES [Special War Examination], 3 Ronald Park Avenue, Westcliff-on-Sea.
 COGSWELL : VICTOR GORDON [Special War Examination], "Sunnycote," London Road, North End, Portsmouth.
 COLE : ERIC [Special War Examination], Commerce House, Leckhampton, Cheltenham.
 COOK : HERBERT JAMES [Special War Examination], School House, Ryhope, Sunderland.
 CORDINGLEY : REGINALD ANNANDALE [Special War Examination], 11 Irlam Road, Sale, Cheshire.
 COTTON : GILBERT HENRY [Special War Examination], 60 Regent's Park Road, N.W.1.
 COUCHMAN : HAROLD WILLIAM [Special War Examination], Mount Pleasant House, Tottenham, N.
 COWTAN : ALBERT CHARLES [Special War Examination], "Elm Way," Eastfields Road, Acton, W.3.
 CREGAN : EDGAR WILSON [Special War Examination], 23A Golders Way, Golders Green, N.W.11.
 DETMOLD : FREDERICK GUY [Special War Examination], 100 Redcliffe Gardens, S.W.10.
 EDWARDS : WILFRID BYTHELL [Special War Examination], Victoria Villa, Flint, N. Wales.
 FIELDER : GEORGE HAROLD [Special War Examination], 55 Broxholm Road, West Norwood, S.E.27.
 GRANGER : WILLIAM FRASER [Special War Examination], 8 New Square, Lincoln's Inn, W.C.2.
 GREENWOOD : JAMES HENRY [Special War Examination], 13 Water Lane, Brixton Hill, S.W.
 GRIFFITH : HUGH NICHOLAS [Special War Examination], 31 Tithebarn Road, Southport.
 GUY : WALDO EMERSON [Special War Examination], The Vicarage, Claverley, Shropshire.
 HAIRD : TOM WILLIAM [Special War Examination], 56 Wilberforce Road, Leicester.

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HARDING: FRED HAROLD [Special War Examination], 54 Knighton Fields Road, Leicester.

HAUGHAN: JOHN HOLLIDAY [Special War Examination], The Grey House, Silloth, Cumberland.

HEARD: GORDON THOMAS [Special War Examination], Elbro House, Princes Road, Buckhurst Hill, Essex.

HOLLIDAY: ALBERT CLIFFORD [Special War Examination], 61 Ashton Street, Liverpool.

HOWELLS: DAVID JOHN [Special War Examination], "Bryn Hywel," Clase Road, Morriston, Swansea.

HUNT: REGINALD [Special War Examination], The Homestead, Sunningwell Road, Oxford.

HUNTER: HARRY CORNELIUS [Special War Examination], West View, Hadley Road, New Barnet, Herts.

JOHNSON: CAMPBELL MCALPIN CAMERON [Special War Examination], "Monteith," Stroud Road, Gloucester.

JONES: REGINALD HERBERT ANDREWS [Special War Examination], 18 Broughton Road, West Ealing, W.13.

JONES: RONALD HUGH [Special War Examination], 3, Gnoil Avenue, Neath, S. Wales.

JONES: TOM LEONARD [Special War Examination], "Tiryddail," Alma Street, Newport, Mon.

KESSEY: WALTER MONCKTON, M.C., A.R.C.A., A.R.E. [Special War Examination], 44 Rusholme Road, Putney, S.W.

KIRBY: EDWARD [Special War Examination], 151 Alexandra Road, Wellingborough, Northants.

KNOTT: ALBERT LESLIE [Special War Examination], 1 St. Gabriel's Road, Cricklewood, N.W.2.

LANGDELL: GEORGE ARTHUR [Special War Examination], 23 Westcroft Square, Ravenscourt Park, W.6.

LAVENDER: EDWARD PRICE [Special War Examination], Stifford Rectory, Grays, Essex.

LEATHART: JULIAN RUDOLPH [Special War Examination], 8 New Square, Lincoln's Inn, W.C.2.

LEWIS: GEORGE STANLEY [Special War Examination], 4 Ninth Avenue, Old Swan, Liverpool.

LUKE: REGINALD LATHAM [Special War Examination], 72 Oxford Street, W.

MAHON: SIDNEY EDWARD [Special War Examination], 74 Cambridge Road, Great Crosby, Liverpool.

MARTIN: NATHANIEL [Special War Examination], Scottish Club, Endsleigh Gardens, Euston Road, W.

MAUGER: PAUL VICTOR EDISON [Special War Examination], 250A, Gloucester Terrace, W.2.

MILLER: CLAUDE ST. JOHN GARLE [Special War Examination], 88 Bickenhall Mansions, Gloucester Place, W.1.

MINTY: ROBERT JAMES HUGH [Special War Examination], 35 Craven Street, Charing Cross, W.C.2.

MITCHELL: EDWARD ARNOLD [Special War Examination], 17 Hanover Square, W.1.

NEWTON: PERCY MAURICE [Special War Examination], 10 Berkeley Street, Hull.

NORTON: CHARLES JOSEPH [Special War Examination], 1 Bridge Avenue, Hammersmith, W.6.

OWEN: ARTHUR TREVOR [Special War Examination], "Myrtle Bank," Dalmorton Road, New Brighton, Cheshire.

PENMAN: EDWARD MEADOWS [Special War Examination], 1 Thorpewood Avenue, Sydenham, S.E.26.

PRICE: HARRY JAMES PARKIN [Special War Examination], 19 Eastholm, Golders Green, N.W.11.

PRICHARD: LIONEL ARTHUR GEORGE [Special War Examination], 17 Sixth Avenue, Old Swan, Liverpool.

REES: VERNER OWEN [Special War Examination], 32 Blandford Road, Bedford Park, W.4.

REVITT: GEORGE [Special War Examination], County Offices, St. Mary's Gate, Derby.

RIPPINGHAM: THOMAS FRANCIS [Special War Examination], 42 Upper Manor Street, Chelsea, S.W.

SCRIVEN: CHARLES [Special War Examination], 51A Alexandra Road, South Hampstead, N.W.8.

SMITH: ALFRED EWART [Special War Examination], 48 Tyndale Street, Leicester.

SMITH: CECIL [Special War Examination], 17 Winchester Avenue, Brondesbury, N.W.6.

STURGEON: JOHN HENRY [Special War Examination], 13 Chesham Terrace, King's Cliff, Brighton.

SUTCLIFFE: THOMAS WILFRID [Special War Examination], 22 Edmund Street, Rochdale, Lancs.

THORBURN: RICHARD [Special War Examination], 200 Portsdown Road, Maida Vale, W.9.

TRIMM: CHARLES ALGERNON, M.C. [Special War Examination], "Firtor," 22 Lower King's Road, Kingston-upon-Thames.

WALKER: REGINALD BECKWICK [Special War Examination], 28 Chichele Road, Cricklewood, N.W.2.

WHITE: CHARLES STANLEY [Special War Examination], 34 Bedford Square, W.C.1.

WILLIAMS: EDWIN [Special War Examination], 201 Edge Lane, Liverpool.

WILLIAMS: HOWARD [Special War Examination], "Cartref," 37 Kimberley Road, Roath Park, Cardiff.

WINN: THOMAS JOHN ROSEWARNE [Special War Examination], Trevone, Truro, Cornwall.

Subscriptions, Contributions and Fees from Fellows, Associates, Licentiates and Students became due on 1 January as follows:—

Fellows	..	..	..	£5	5	0
Associates	..	..	..	3	3	0
Licentiates	..	..	..	2	2	0
Students	..	..	..	0	10	6

Members' Column

Members, Licentiates, and Students may insert announcements and make known their requirements in this column without charge. Communications must be addressed to the Editor, and be accompanied by the full name and address. Where anonymity is desired, box numbers will be given and answers forwarded.

CHANGE OF ADDRESS.

MR. H. J. VENNING has removed to No. 5 Bedford Row, W.C.1. Telephone: Chancery 7431.

OFFICE TO LET.

LIGHT OFFICE to let in Bedford Row, suitable for Architect or Quantity Surveyor; telephone and other facilities.—Apply Box 322, c/o Secretary R.I.B.A.

MESSRS. WELCH AND HOLLIS.

MR. HERBERT A. WELCH, A.R.I.B.A., has taken into partnership as from 1 January last Mr. H. Clifford Hollis, A.R.I.B.A., and the practice will in future be carried on under the title of Messrs. Welch and Hollis. The address, No. 7 New Square, Lincoln's Inn, W.C., will remain unchanged.

OFFICE ACCOMMODATION.

A FELLOW desires offices in the City on or before 25 March. See JOURNAL, 12 November.—Box 3101, c/o Secretary R.I.B.A.

PARTNERSHIP.

AN ARCHITECT in practice in the City is prepared to join another in partnership or on terms to combine in office establishment.—Address Box 22, c/o Secretary R.I.B.A., 9 Conduit Street, W.1.

ASSOCIATE 1902. Captain, 4½ years' service. London experience. Engineering knowledge, also fair Quantity Surveyor. Housing and Town Planning. Desires a partnership.—Apply Box 3122, c/o Secretary R.I.B.A., 9 Conduit Street, London, W.1.

ASSOCIATE (35), holding £1,000 per annum London appointment for past 3 years, desires to purchase partnership or practice; provinces or London; capital, £1,000; minimum income £400.—Box 1112, c/o Secretary R.I.B.A., 9 Conduit Street, W.1.

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APPOINTMENTS WANTED.

A.R.I.B.A. (38), University Graduate (ex-officer, major), pre-war practice, desires appointment with a view to acquiring an interest in an established firm in London. Varied experience, including the design of Banks and large Public Buildings.—Address Box 21, c/o Secretary R.I.B.A., 9 Conduit Street, W.1.

PROBATIONER R.I.B.A., age 22, recently completed Articles, seeks appointment as Improver. Good draughtsman, experience on large housing scheme, and general work. Ex-Service man.—Box 1122, c/o Secretary R.I.B.A., 9 Conduit Street, London, W.1.

F.R.I.B.A. recommends youth anxious to get into architect's office as office-boy. Has some taste for draughtsmanship, and is willing to learn.—Apply Box 2021, c/o Secretary R.I.B.A., 9 Conduit Street, W.1.

A.R.I.B.A. (29), Associate member of the Town Planning Institute, desires engagement. Accustomed to supervising office staff and works in course of construction. Previously employed as architectural chief assistant. All-round experience and special knowledge of town planning and estate development.—Box 5122, c/o Secretary R.I.B.A.

A.R.I.B.A. Nearly 20 years' experience in big offices, on banks, offices, shops, warehouses, factories, flats, hotels, hospitals, baths, housing and domestic works. Used to taking charge of office and buildings. Present engagement terminating through lack of work. Desires responsible position.—Box 7122, c/o Secretary R.I.B.A., 9 Conduit Street, London, W.1.

A.R.I.B.A. desires appointment; is prepared to acquire an interest in established firm after probationary period. Eighteen years' varied experience. Ex-R.A. Schools student. Would join architect in competition or speculative work on mutual terms.—Address Box 1421, c/o Secretary R.I.B.A., 9 Conduit Street, London, W.1.

A.R.I.B.A. (35), ex-officer, disengaged owing to reduction of staff, has recently held a responsible appointment under a County Council. All-round experience. Highest credentials.—Address Box 144, c/o Secretary R.I.B.A., 9 Conduit Street, W.1.

Second Resolution within limits prescribed by the Practice Standing Committee in consultation with interested architects.

4. That the names suggested—namely, those of Messrs. W. R. Davidge, Herbert A. Welch, Francis Jones, Sydney Perks, Wm. Woodward, H. T. Buckland, and Courtenay Crickmer—be referred to the Practice Standing Committee, and that the Committee be requested to consider these names and others and to submit six names to a General Meeting of the Royal Institute with a view to the selection of three of them by ballot.

—and stated that, in accordance with the terms of the fourth Resolution, the Practice Standing Committee had considered the matter referred to them, and had decided to submit the names of the following six members to the Special General Meeting with a view to the selection of three of them by ballot:

Mr. E. G. Allen, F.R.I.B.A.
Mr. Henry V. Ashley, F.R.I.B.A.
Mr. H. T. Buckland, F.R.I.B.A.
Mr. W. R. Davidge, F.R.I.B.A.
Mr. Francis Jones, F.R.I.B.A.
Mr. Herbert A. Welch, A.R.I.B.A.

The Secretary read a letter from Mr. W. R. Davidge, withdrawing his name from the list.

A vote by ballot was then taken, and the votes were counted by Mr. W. W. Scott-Moncrieff [F.] and Mr. A. Welford [A.], who were appointed scrutineers by the meeting, and the Chairman declared that the following members had been duly elected:

Mr. H. T. Buckland [F.] (Birmingham).
Mr. Francis Jones [F.] (Manchester).
Mr. Herbert A. Welch [A.] (London).

The meeting terminated at 6.10 p.m.

Minutes VI

SPECIAL GENERAL MEETING—HOUSING FEES.

At a Special General Meeting, summoned by the Council under By-law 65, and held on Thursday, 22 December 1921, at 5.30 p.m., Professor S. D. Adshead, Vice-President, in the Chair; the attendance book was signed by 24 Fellows (including 5 members of the Council), 9 Associates, and 4 Licentiates.

The Minutes of the Special General Meeting, held on 28 November 1921, were taken as read and signed as correct.

The Secretary read a letter, dated 20 December, from Mr. J. H. Kennard [F.], in which he contended that the Meeting on 28 November was not properly constituted under the By-laws, that the business transacted thereat must be regarded as void, and that it was consequently impossible to transact the business on the Agenda paper.

The Chairman ruled that the Meeting on 28 November was properly constituted, and that there was no reason for not proceeding with the business before the meeting.

The Chairman reminded the meeting of the following Resolutions which had been passed at the meeting on 28 November—

1. That while reaffirming the objections to Memoranda Nos. 51 (D) and 52, which led to the Resolution of 4 July 1921, this Meeting recognises the *bona fides* of the Ministry in putting forward Memoranda Nos. 51 (D) and 52 under the impression that the R.I.B.A. had agreed thereto.

2. That the Ministry of Health be requested to amend and re-draft the terms of the engagement of architects in connection with housing schemes in conjunction with accredited representatives of the Royal Institute.

3. That for this purpose three members be appointed with full powers to agree with the Ministry upon a scale for abandoned work and upon the matters referred to in the

Minutes VII

At the Fifth General Meeting (Business) of the Session 1921-1922, held on Monday, 9 January 1922, at 8 p.m.—Mr. Paul Waterhouse, President, in the Chair. The attendance book was signed by 14 Fellows (including 7 members of the Council), 10 Associates, and 1 Licentiate.

The Minutes of the meeting held on 19 December, having been taken as read, were agreed as correct.

The Hon. Secretary announced the decease of Mr. James Henry La Trobe, elected *Associate* 1886 and *Fellow* 1893, of the firm of Messrs. La Trobe and Weston, of Bristol, and it was *RESOLVED* that the regrets of the Royal Institute for his loss be entered on the Minutes and that a message of sympathy and condolence be conveyed to his relatives.

Messrs. P. J. Hiorns [A.] and F. L. Johnson [A.], attending for the first time since their election, were formally admitted by the President.

The following candidates for membership were elected by show of hands:—

AS FELLOWS (2).

BENNETT: THOMAS PENBERTHY [A. 1912], London.
FOSTER: REGINALD CHARLES [A. 1909], Buckhurst Hill, Essex.

AS ASSOCIATES (5).

BASTO: ANTONIO HERMENEGILDO DE SENNA FERNANDES, London.
FORSHAW: JOHN HENRY, M.C., Ormskirk, Lancs.
PLEDGE: CHARLES TERRY, London.
POPE: CLEMENT LAWRENCE, Wimborne, Dorset.
SHEPPARD: EVERARD, Beckenham.

The proceedings closed at 8.15 p.m.



FIG. 15.—THE AQUEDUCT OF MAINTENON
From a Drawing by Sir Reginald Blomfield

Sir Reginald Blomfield's History of French Architecture, 1661 to 1774*

By A. W. S. CROSS, M.A., VICE-PRESIDENT R.I.B.A.

THE recently published continuation of Sir Reginald Blomfield's well-known history of French architecture deals with the interesting period following the death of Mazarin, in 1661, down to the end of the reign of Louis XV, in 1774. Hence a very considerable portion of the two fascinating books now before me has reference to that golden epoch of art known to readers of Voltaire as *le Siècle de Louis XIV.* In the opening chapters the author of the new history explains, in a clear and concise manner, how after the end of his long minority, and at an early stage of his actual reign, Louis XIV, through his great minister Colbert, ordained a system of administrative regulation and control under which every group of workers, in-

cluding artists, had its recognised function in the State. To add lustre to French art and industry, and, by their means, to surround the throne with the attributes of pomp and glory, fitted in admirably with the general policy of king and minister for the political aggrandisement of their country. Recognising the value of art as a means of enhancing national glory, although personally indifferent to its other claims, Colbert was ever ready to encourage artists and men of letters, with lavish generosity. But, loyal and devoted as he was to his royal master, Colbert was by no means unmindful of the interests of the people. And in surrounding the king with all that art and industry could supply he had a two-fold object—namely, the glorification of the monarch

* *A History of French Architecture from 1661 to 1774.* By Sir Reginald Blomfield, R.A. 2 vols. (London: G. Bell & Sons, Ltd.)

and the prosperity of the people. With these aims in view glass-workers were brought from Venice, and lace-workers from the Low Countries, that the secrets of their work might be revealed to French manufacturers. Costly factories, such as those of the Savonnerie and the Gobelins, were organised as practical schools of instruction and research wherein chosen apprentices could be trained in industrial art. Added to which the erection of palaces and public buildings was intended to afford commissions for French artists and to become the medium of technical and artistic education for those employed upon them. Thus the centres of art, the Academy of Architecture, the Academy of Painting and Sculpture, and the French Academy at Rome, were not reorganised, or called into being, *solely* in order to raise royal palaces on a scale of magnificence hitherto unknown. On the contrary, as Sir Reginald Blomfield tells us, Colbert's very laudable aim was to make French art supreme by the foundation, or through the instrumentality of, state-aided academies and manufactories. And to this great minister of a supremely vainglorious and egotistical king is due the credit of having foreseen that the interests of the State are not only inalienable from those of industry, but that, in many cases, the latter are in close alliance with art. "One single instance," says Levasseur, "suffices to measure the distance which separates the administration of Colbert from that of his predecessors. Whilst Fouquet did not get even twenty-three millions of the eighty-four levied on the nation, Colbert in his first year knew how to get in fifty-three of the eighty-eight millions he himself levied. . . . For eleven years he balanced receipts and expenditure. He inherited a debt of eleven millions of 'rente' and left behind him only a debt of eight millions, after having met the expenses of two wars and of the wildest extravagance." * A description of the "Royal building staff," an organisation for dealing with State buildings, appears in chapter iv, vol. i, of the book under review. In the preparation of this chapter the "Comptes des Bâtimens du Roi," from 1664, have been drawn upon as offering "the only trustworthy evidence as to Colbert's system of administration. At the head of all was Colbert himself as *Surintendant et ordonnateur general des Bâtimens, jardins, tapisseries et manufactures*, practically Minister of Fine Arts."

* Levasseur, *Hist. des Classes Ouvrières*.

The subordinates of the *Surintendant* included three *Intendants et Ordonnateurs des dits bastimens*, three *Controleurs général*, one of whom, the famous André Le Nôtre, held his office from 1668 until his death in 1700. The higher grade administrative establishment was completed by three *Trésoriers général des bâtimens*, each acting alternatively. Immediately following the above *officiers des Bastimens* came the executive officials, classified under the general title of *officiers qui ont gages pour servir généralement dans toutes les maisons royales*, the list of which, in 1669, was headed by Louis Le Vau, *premier architecte de S. Majesté*, and followed by Le Muet, *autre architecte*, and François Le Vau. Then came Le Brun, director of painting in all the royal houses, who was also director of the Gobelins, Charles Errard, Félibien, *historiographe des bâtimens du Roy*, and Charles Perrault. The list contains "some seventy odd names, among them Lezr and Coypel, painters, Lerambert, Guerin, Girardon, Regnaudin, and Marsy, sculptors, Israel Silvestre, the engraver, Claude Mollet and André Le Nôtre, designers of gardens, and Francini, the hydraulic engineer. It also includes masons, carpenters, joiners, *ébénistes* (cabinet-makers), smiths, glaziers and plumbers, at uniform salaries of thirty francs a year. This salary appears to have been more in the nature of a retaining fee than of payment for services rendered. The essential thing was the appointment as *maçon, menuisier or ébéniste du Roi*. Special privileges were attached to these offices, which were in great demand, and when they were neither fresh appointments nor those passed on from father to son, they were conveyed by purchase." It is interesting to find that the members of the Academy of Architecture, Blondel, Gittard, D'Orbay, Bruant, Le Pautre, Mignard and Mansart, were, *ipso facto*, *architectes du Roy*, and also received small salaries as members of the Academy. In addition to these architects and tradesmen who were on the staff, other architects were told off to special buildings. Thus, in 1679, D'Orbay was in charge of Fontainebleau; Desgodetz, author of *Les Edifices Antiques de Rome*, was "controller" of Chambord, and two young architects, named Matthieu and Pinart, were in charge of the park of S. Germain-en-Laye. "This excellent practice of assigning *Prix de Rome* students to the charge, under higher direction, of important historical buildings prevails in France to this day, and might well be introduced into this country." Whilst

accepting, as a general classification, Henry Lemonnier's division of the reign of Louis XIV into two parts—that from 1661 to 1690, which was the age of Molière, Racine, Boileau, Bossuet, La Fontaine, Claude and Charles Perrault, J. H. Mansart, Girardon, Puget, Coysevox, Le Brun and Mignard, and that from 1690 to 1715, the age of Saint-Simon, Fénelon, Coustou, Jouvenot, Coyvel and Robert de Cotte—Sir Reginald Blomfield reminds us that the king's great building activities terminated in 1689 and J. H. Mansart did not become *Surintendant* until 1699, and died in 1708. "Moreover, there was an earlier transition stage, from the architecture of the time of Mazarin to that of Colbert, which ended, with the death of Le Vau, in 1670, and the foundation of the Academy of Architecture in the following year." Le Vau belonged quite as much to the age of Mazarin as to that of Colbert, and of this transition period he is the typical representative. Born in 1612, the first important work that can be assigned with any certainty to Louis Le Vau was the Hôtel Lambert, on the Isle St. Louis, built about the middle of the seventeenth century, and described as "a heavy, gloomy-looking building outside." Another of Le Vau's earlier works was the Hôtel Salé dit de Juigné in the Rue de Thorigny, the details of which, although rather heavy and out of scale, are more attractive than those of the Hôtel de Lambert. The palatial country house of Vaux le Vicomte, designed by Le Vau in 1653, also meets with the historian's severe but not unfair criticism. At Vaux "Le Vau missed the picturesque quality of the older manner, and failed to catch the dignity and restraint of the new." The internal decorations of this ornate structure, which was built for the unfortunate Fouquet, were designed by Le Brun, whilst the gardens and "the Grotto of Vaux with its water-piece and fountains, its ramps and its canal, 1,000 yards long by 40 yards wide, are a fine example of Le Nôtre in his earliest manner."

Le Vau's work at the Louvre included the rebuilding of Lescot's block on the river side and the Pavillon du Roi. The design, now concealed by Perrault's front, was certainly open to the fault of detail to which Blondel refers in calling attention to the bad habit acquired by the seventeenth-century architects of breaking up the roofs to an extent that caused the central and end pavilions, in addition to the intervening blocks, to present the appearance of separate buildings placed side by side.

In 1661 Le Vau prepared his first plan for remodelling, or rather enlarging, the small hunting lodge of Louis XIII at Versailles. This work was proceeded with in a leisurely way until 1668, when some of the then completed buildings were demolished, and "the three blocks of buildings enclosing the old château on three sides were built from Le Vau's design, together with an orangery, afterwards destroyed to make way for the existing orangery." Le Vau's work at the Tuileries, which he commenced to remodel and complete in 1664, "showed the least possible regard for the work of his predecessors," De l'Orme, Du Cerceau, and Bullant, much of which he ruthlessly destroyed.

With changes of environment and persons, the story of the farcical competition for the completion of the Louvre, in which the King, Colbert, Bernini, and the brothers Charles and Claude Perrault played the principal parts, would serve as a fair example of the intrigues that usually surround modern architectural competitions.

The play opened with Colbert's appeal to the King against the extravagant expenditure at Versailles, which hindered the execution of the minister's favourite project, the completion of the Louvre in such a manner that, for size and magnificence, it would surpass the palaces of all other kings and countries. Although the appeal was made in vain, as the King took no interest in the Louvre and other buildings of Paris whilst Versailles was his pleasure-house—his own creation—Colbert was determined not to forego his project. But as he had no knowledge of art, and his mind was too great to allow him to remain unconscious of his own deficiency, some time before his appeal to the King (to be exact, in 1663) he had gathered round him a few confidential advisers, amongst whom one of the most influential was his own clerk, Charles Perrault, the author of the curious memoirs that contain so much of the secret history of these transactions. The design, prepared by Le Vau, the first architect to the King, for the principal façade of the Louvre did not meet with the approval of the minister, who stopped the work, already in course of execution under Le Vau, and invited the architects of Paris to criticise the design for the new façade and to submit suggestions of their own.

Among the designs thus produced by the outside architects, who one and all condemned Le Vau's scheme, was one, as Charles Perrault tells us, by his "brother the doctor," which met with the approval

Chaque étage de la merveilleuse façade du Louvre a son caractère particulier. Le premier étage est à colonnade, le second à balustrade, le troisième à fronton, le quatrième à corniche, le cinquième à fronton, le sixième à corniche, le septième à fronton, le huitième à corniche, le neuvième à fronton, le dixième à corniche, l'onzième à fronton, le douzième à corniche, le treizième à fronton, le quatorzième à corniche, le quinzième à fronton, le seizième à corniche, le dix-septième à fronton, le dix-huitième à corniche, le dix-neufième à fronton, le vingtième à corniche.

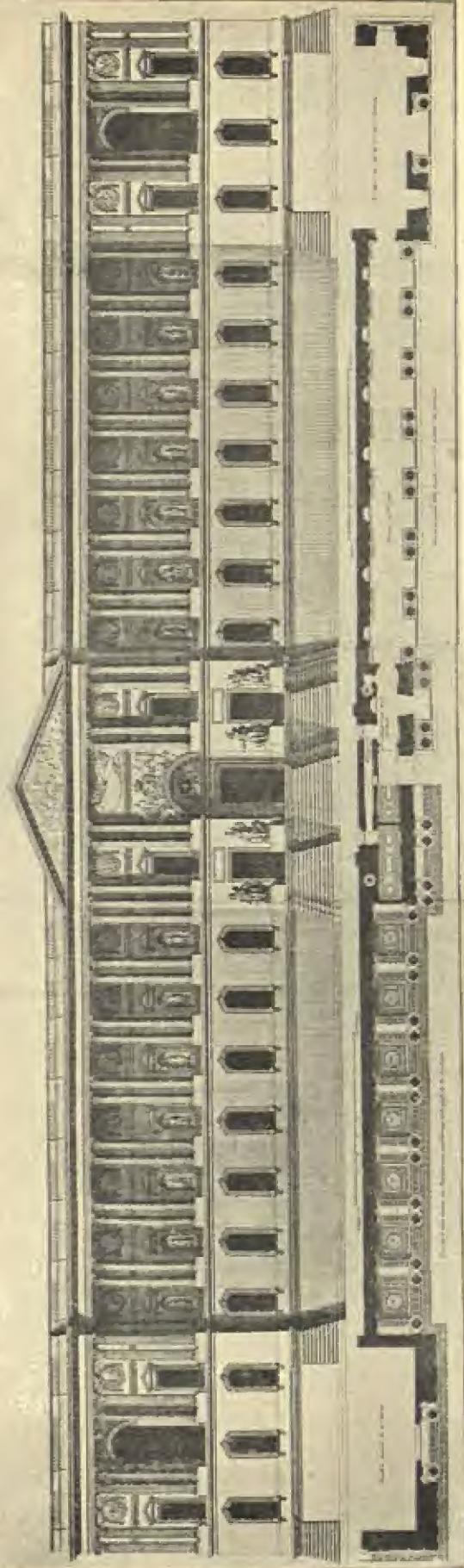


FIG. 1.—THE EAST FRONT OF THE LOUVRE, BY CLAUDE PERRAULT

Principale entrée du Louvre du côté de St Germain. Le dessin de l'architecte Bernini.

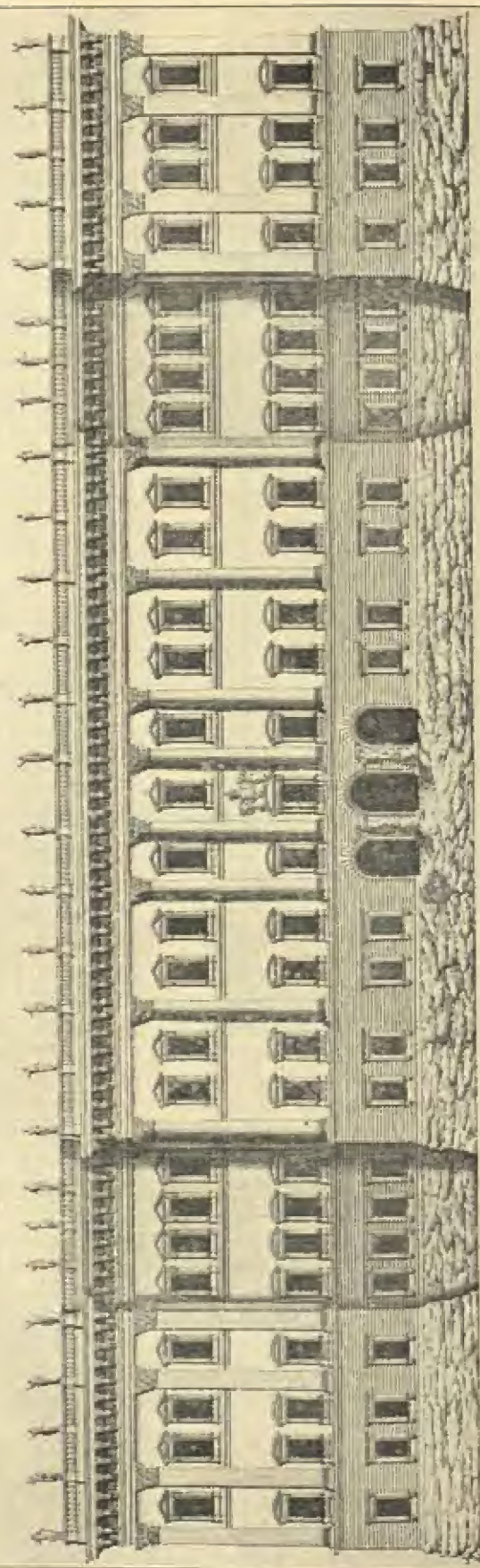


FIG. 3.—EAST ELEVATION AND PRINCIPAL ENTRANCE, BERNINI'S DESIGN FOR THE LOUVRE

of the architects of Paris, probably because none of them feared the rivalry of an amateur. The great feature of Claude Perrault's plan was an immense colonnade of coupled Corinthian columns, and the novelty and splendour of the project are said to have astonished Colbert. But it would appear that his admiration of Claude Perrault's work, and his disapprobation of Le Vau's design, had both been inspired, of set purpose, by Charles Perrault, who from the first had determined to procure the honour of completing the Louvre for his brother Claude. As, naturally enough, Colbert hesitated to entrust so important an undertaking to an amateur, it was decided to send all the designs that had been submitted to Poussin in Rome, in order that he might obtain the opinion of the most famous Italian architects then living, more particularly of Pietro di Cortona, Rainaldi, and Bernini, and a letter to Poussin was drafted by Charles Perrault giving him instructions as to procedure, and nominating him as director of the newly established French Academy at Rome. This letter was not sent, but the designs were, and the Italian architects followed the example of their colleagues in Paris by at once sending in designs of their own, "*tout fort bizarres et n'avoient aucun goût de la belle et sage architecture*" (Perrault, *Mémoires*).

The fresh plans and fresh criticisms received from Rome proved a further source of embarrassment to Colbert, who still hesitated to take the responsibility of making the award. Seizing the opportunity, the Abbé Benedetti proceeded to press the claims of Bernini—painter, sculptor, and architect—who for over thirty years had been supreme among the artists of Europe, and from whom a criticism and a design had also been solicited by the French ambassador. Although, as is apparent from his letter of 3 October 1664, Colbert noticed that the Cavaliere Bernini "seemed to have thought of nothing but the outside," his difficulty was of so pressing a nature that the Italian artist was summoned to Paris by a personal letter from the King. The Perraults now appeared to have been completely checkmated, as the most absurd concessions were made to the vanity of Bernini to secure his goodwill and co-operation in the completion of the Louvre. Bernini's journey to France was in the nature of a triumphal progress. When he left Rome the whole population turned out in its anxiety lest Louis XIV should keep him in France. The officials of all the towns on the way were ordered to

present him with gifts. Lyons treated him as a prince of the blood, officers were sent from the court, and the King's own *maître d'hôtel*, M. de Chambray, was told off to accompany him wherever he went. Bernini arrived in May, and was lodged in the Hôtel de Frontenac, where he set aside a room for the exhibition of his designs, to which no one was admitted but Colbert and Chambray, the *maître d'hôtel*. Charles Perrault, however, managed to get in, and set about his schemes for the elimination of Bernini and the introduction of his brother. He admits that when Colbert asked if he had seen Bernini's designs he denied having done so, and proceeded to ask leading questions "*qui alloit à lui [Colbert] faire remarquer que le cavalier Bernini étoit tombé dans les mêmes défauts que l'on reprochoit au dessein de M. Le Vau et de la plupart des autres architectes.*" Bernini, in spite of his great reception, never had fair play in France. Charles Perrault grossly abused his office in the interest of his brother, and by his persistent intrigue made Bernini's position impossible. From the very first the French architects were determined that, whoever did the work, it should not be Bernini or any foreign architect. And whilst compelled to receive their Italian *confrère* with every outward token of respect, in secret the French architects made common cause against him, whispering that their foreign rival eclipsed all others only by his pretensions and arrogance. However, Bernini soon gave them an opportunity of openly showing their enmity. In the gigantic and impossible scheme of rebuilding which he had prepared it was discovered that Bernini's planning neglected many domestic requirements which contemporary French architects had begun to provide. His design also met with the criticism that its author had "ignored all details—thought only of making great rooms for banquets and dramatic performances, and did not trouble his head about comfort and convenience and the lodging of the inmates." This was enough for the practical mind of Colbert, and in insisting upon knowing "where and how the king would be housed, how the service could be most conveniently performed," and a thousand details of the same kind, the minister overwhelmed Bernini with memoranda and letters. To judge from Charles Perrault's account, which, however, in all probability, is tainted with malice and exaggeration, the disputes between Colbert and Bernini must have been of a very comical nature: "The Cavaliere understood nothing and

did not want to understand anything of all these details, considering it unworthy of a great architect like himself to descend to such minutiae." Then Bernini complains: "M. Colbert treats me like a little boy with all his idle talk about privies and underground conduits." Finally, one day Bernini "brought a plan which he held against his breast, and, addressing M. Colbert, told him he (Bernini) was convinced that the angel who presided over the fortunes of France had inspired him, that he honestly acknowledged that he was incapable of inventing anything so magnificent, so great, and so happy as the design which had come into his mind."

By persistently dwelling upon the practical defects in Bernini's plans, Charles Perrault succeeded in working Colbert up into a state of exasperation against the Italian. But, unfortunately, in bringing him to Paris and treating him as one inspired, Colbert had committed the King so deeply that it was impossible to dismiss Bernini in the ordinary way. Thus, forced to temporise and to appear to approve that which he secretly condemned, so successfully was Colbert able to conceal his irritation from those about him that, on one occasion, even the crafty Charles Perrault thought he had overreached himself. Greatly alarmed at the public reprimand he had received from Colbert at a meeting of the advisory board, Charles Perrault followed the minister after the meeting broke up, humbly entreating him to overlook the liberty he had taken in criticising Bernini's plans. "What!" replied Colbert furiously, "do you think I don't see it all as well as you? *Peste soit du B qui pense nous en faire accroire.*" "I was astonished," says Perrault, "and gave thanks to Almighty God that he granted me this clear view of the court and of the dissimulation necessary to those who would live therein!" It was evident that the fate of Bernini's design was sealed. But meanwhile, despite the embarrassing situation, the foundations of the new buildings were in course of construction. On 17 October 1665 the King himself laid the first stone with great pomp and ceremony, and before the close of the year the work was well advanced.

Every effort was made, by the exercise of petty acts of discouragement and annoyance, to force Bernini to take the initiative in relieving his unwilling hosts of his presence. And under these constant attacks the vain Italian was at length compelled to realise that his triumphant honours were

to be exchanged for humiliation and defeat, and thereupon he requested to be allowed to return to Rome. His ill-humour burst forth when his secret enemy, Charles Perrault, brought to him the King's parting gifts, a grant of a yearly pension and a sum of money. "These I carried to him in my own arms," Perrault tells us, "in order to do him the more honour." But Bernini was not to be deceived. "Such good days," he said, "would be pleasant enough if they came often. As for your patents, I don't look to see them paid above once or twice at the most."

His intrigues against Bernini having been successful, Perrault now turned his attention to Le Vau. But the last act of the play and Sir Reginald Blomfield's comments upon it had better be told in his own words:—

"The whole episode is curious, the reference of the designs to Italy, the importation of the most famous Italian artist of his time, and then the complete *volte-face* and the organised and successful effort to drive him out of the country. It was a pity the invitation was ever sent, for the French never meant Bernini to do the work, and there was no reason why he should, for there were certainly better architects in France at the time than any that existed in Italy. It cost the country over a million francs, all wasted, for no sooner had Bernini left than Charles Perrault persuaded Colbert to abandon Bernini's design and to start afresh, on the ground that that design involved the total destruction of the work already carried out at the Louvre under Lescot and Goujon, Lemercier and Le Vau, and the designs for its completion prepared, before the episode of Bernini's visit, by Le Vau and Claude Perrault, were again submitted to the King at St. Germain-en-Laye. The scene as described in Perrault's *Mémoires* is characteristic of the court of Louis XIV. The King asked Colbert for his opinion; Colbert supported Le Vau's design, whereupon the King promptly decided on that of Perrault's. '*Je vis que M. Colbert avoit agi en habile courtisan que vouloit donner tout l'honneur du choix à son maître,*' and this became the regular practice at the court when questions of architecture were considered, a practice developed into a fine art by Jules Hardouin Mansart."

A very comprehensive descriptive account of Claude Perrault's well-known colonnade includes some able criticisms of the design, in which its merits and demerits are noted with equal fairness.

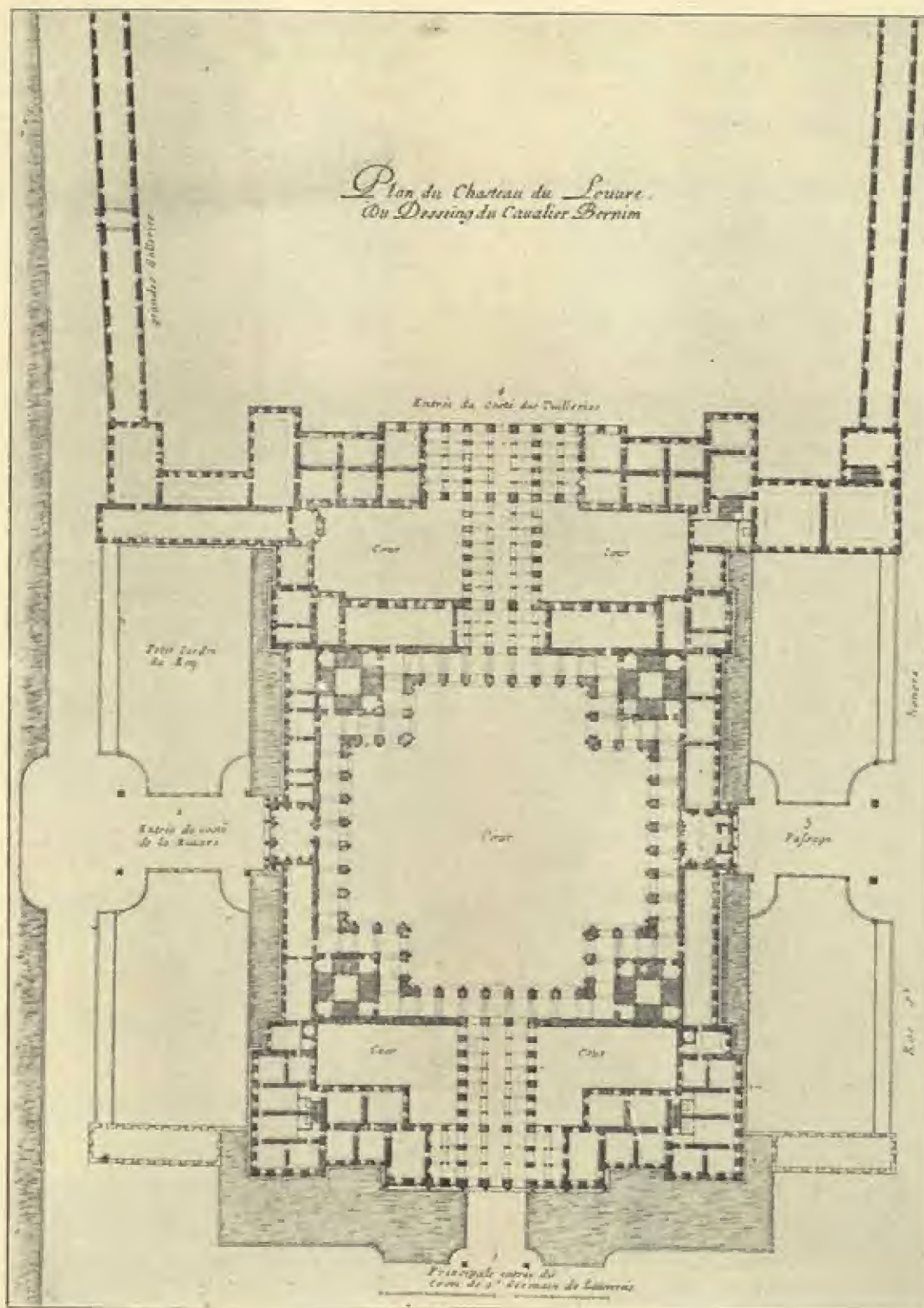


FIG. 2.—BERNINI'S DESIGN FOR THE LOUVRE, GROUND PLAN

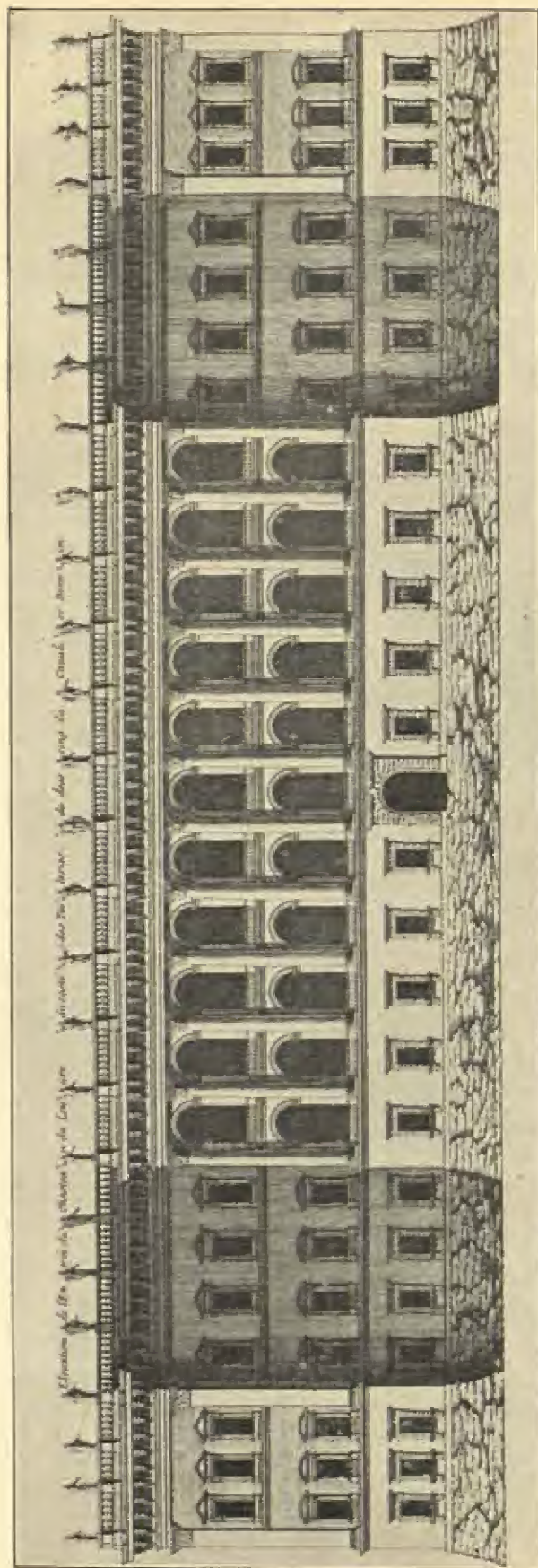


FIG. 4.—WEST ELEVATION OF BERNINI'S DESIGN FOR THE LOUVRE

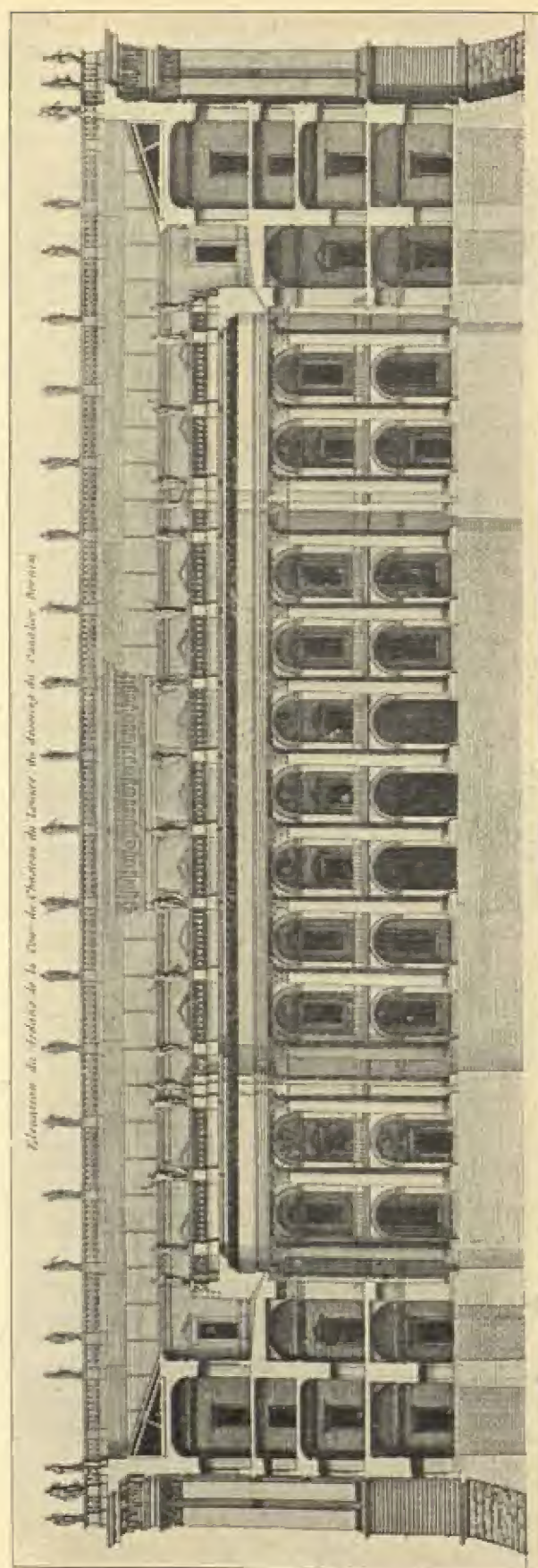


FIG. 5.—SECTION THROUGH THE GREAT COURT OF BERNINI'S DESIGN FOR THE LOUVRE

"The architects of the time of Louis XIV, at any rate the successful ones, were closely connected; they had behind them, and around them, in the building officials and contractors in the royal employment, a solid phalanx of kinsmen and connections, which enabled them to take up a position in business not wholly dissimilar to that which had been so grossly abused by the *maîtres jurés*." The families of D'Orbay, Gabriel, Hardouin, Mansart, De Cotte and Bruand are conspicuous examples. "These families intermarried or allied themselves to the families of court painters, sculptors or engravers, and must have formed a rather pleasant artistic circle of their own, a circle, however, jealously guarded against the entrance of outsiders."

Of the famous André Le Nôtre, who was one of the few honest men associated with the court of Louis XIV, the author of the book under review writes as follows: "André Le Nôtre is one of the most attractive figures on the crowded stage of the court of Louis XIV. Loyal, candid, and sincere, he stands out among his colleagues as a man of transparent honesty and single-minded enthusiasm for his art. Even Saint-Simon lowers his rod when he speaks of Le Nôtre, and refers to him in terms as nearly approaching affection as that exclusive aristocrat ever permitted himself to use. To Saint-Simon Le Nôtre stood for all those qualities the absence of which he regarded as so deplorable in Jules Hardouin Mansart."

Born in 1613, Le Nôtre is first mentioned officially in a brevet of January 1637 by Louis XIII, under which the King placed him in charge of the gardens of the Tuileries, an appointment held up to that time by his father, Jean Le Nôtre. André Le Nôtre's first known work was the garden of Vaux le Vicomte, completed for Fouquet in 1661, the beauty and novelty of which attracted the King's attention and revealed its creator as a man of talent and a consummate master of his art. "The design was full of detail, yet the main idea was straightforward enough. In all the best designs of Le Nôtre the same characteristic features are found—great breadth and simplicity in the general scheme, the utmost use of difference of levels, direct and unbroken vistas leading to dominant features, such as the grotto and cascades at the farther end of the garden, and lastly the lavish employment of water as a means of effect in cascades, canals, fountains and water-pieces. Where Le Nôtre found woods already on the site, he used

them in a very skilful manner as a massed background to his gardens, sometimes running back into them with some architectural feature, but never losing his boundaries. He invariably marked the limits of his garden with definite and formal lines of hedges. Although in his later work he carried his design outside the garden limits by avenues and *pattes d'oie* taken out into the country for miles, there was never any question in the mind of Le Nôtre as to the relations of art and nature. His design throughout showed a frank and splendid disregard of the ways of nature left to its own devices, and the claims for a sort of deification of nature, advanced with such unction by the landscape gardeners in the eighteenth century, would have been simply unintelligible to Le Nôtre and his contemporaries."

In addition to his great work at Versailles, which is admirably described by the historian, Le Nôtre designed the terrace of S. Germain-en-Laye—"3,200 yards long and 40 yards wide; with its magnificent position it is perhaps the finest thing of its kind in existence, and its great scale and bold simplicity show the genius of Le Nôtre at its best"—and among numerous similar works mention may be made of the gardens of Trianon, of Marly, of S. Cloud, of Clagny, of Chantilly, of Meudon, and of Sceaux. The King, who appreciated his great ability, and respected and honoured the character of the man, ennobled Le Nôtre and bestowed upon him the order of S. Michel. But although his world courted and made much of him, as he passed from triumph to triumph, the charming simplicity and truthfulness of his disposition remained unimpaired. "Le Nôtre," said Saint-Simon, "was esteemed and loved by everybody."

Born in 1645, the career of Jules Hardouin Mansart "was one of astonishing and uninterrupted prosperity down to the very day of his death. Whether he won this success on his merits, whether he was really a great architect, and deserved the reputation that he enjoyed in his lifetime, is another question the answer to which is to be looked for in the record of his life, and in the buildings attributed to his designs, but even then we are not at the end of the matter. There remains the obstinate doubt as to who helped, who was really the man who designed these world-famous buildings. Did Mansart himself design them, or was there, as Saint-Simon says quite plainly, some '*architecte sous clef*' whose identity was sedulously concealed?

The evidence, though very suggestive of the truth of Saint-Simon's statement, is not absolutely conclusive. On any showing, Jean Hardouin Mansart must have possessed considerable ability of some sort. He was not born in the purple. The great architect to whom he was distantly related was out of favour. Yet, at an early age, he managed to push his way to the front, and made for himself and maintained a position at the court of Louis XIV without parallel in the history of the architects of any country, ancient or modern. Contemporary success, however, is no criterion of an artist's genius, and the question of Mansart's real place in art is worth sifting carefully, not only because Mansart was at least a very considerable figure in his time, but also because his career is typical of the fortunes of those architects who, whatever their merits, have owed their success to other qualities than those of the artist." The son of Raphael Hardouin, "*premier peintre du Cabinet du Roi*," and, on his mother's side, a grand-nephew of François Mansart, Jules Hardouin assumed the name of Mansart on the death of François Mansart in 1666. According to Saint-Simon, Jules Hardouin Mansart succeeded in attracting the attention of the King "*et profita si bien de sa familiarité passée des seigneurs aux valets aux maçons*" that Louis XIV attributed to him the ability of his great-uncle, and eventually promoted him to one of the highest offices of the State. Entrusted, when quite a young man, with the design of Clagny, built by the King for Mme. de Montespan, Mansart had many opportunities of ingratiating himself with his royal patron, with the result that in 1676, when the young architect was scarcely thirty years old, Louis XIV appointed him architect to the vast works then about to be carried out at Versailles. "The commission of Versailles was momentous in more ways than one. It meant the end of the old régime and the definite inauguration of the new. Colbert had failed in his efforts to keep the court at Paris; the works at the Louvre were abandoned; Claude Perrault, the successful favourite, who had carried everything before him ten years before, was forgotten; the Academicians were more or less ignored. Henceforward Mansart and his *clique* were to have it all their own way, and that fine independence which had distinguished the architecture of Lemercier and François Mansart was now to disappear from French architecture, finally vanquished by officialism on the one hand, and the

irresistible tyranny of court fashion on the other. Not the least disastrous of the many mistakes of Louis XIV was his whole-hearted acceptance of this clever adventurer, who, as an artist, lacked both scholarship and conviction, and, as a man, was destitute of any sense of chivalry and honour." To watch the progress of his building works at Versailles, Trianon, Marly, Clagny, and elsewhere was a perennial source of interest to the King, who delighted in seeing his palaces grow under his own eye. Saint-Simon remarks: "*Il s'amusoit fort à ses bâtiments. Il avoit aussi le compas dans l'œil pour la justesse, les proportions, la symétrie, mais le goût n'y répondoit pas.*"

Owing to Mazarin's neglect of the King's education, nothing had been done to refine and improve his natural taste, which was coarse and florid. Thus the "academic refinements of Perrault made no appeal to him. What he wanted was a robust, aggressive, full-blooded vulgarian. He found his man in J. H. Mansart, and, having once broken loose from the restraint of Colbert, the two ran riot unrestrained at Versailles." The transformation, under Mansart's direction, of the small château of Versailles to the immense palace of Louis XIV is the subject of some excellent descriptive writing, in which much valuable information relative to that great undertaking is dealt with in a marvellously accurate and painstaking manner. As to Mansart's architecture, it is stigmatised as "frigid, monotonous and uninspired. . . . Excepting always the orangery, in the whole of this vast building there is nothing that takes hold of the imagination, nothing that shows a sense of great monumental architecture." Following a brilliantly written review of the architecture of the reign of Louis XIV there is an appreciative account of the various works of two scholarly and able architects, Daviler (1653-1700) and Desgodetz (1653-1728), who, however, failed to leave their mark on the architecture of the day. "They were easily passed in the race by others, yet their patient and indomitable devotion to the study of architecture has preserved their memory when their more successful colleagues have long since fallen into oblivion." An example of the tenacity with which families of the French middle class adhered to their professional tradition from generation to generation is supplied by the Gabriel family, the founder of which was Jacques Gabriel, "*entrepreneur de maçonnerie*," who appears for the first time in the "*Comptes*" of 1667 as contracting

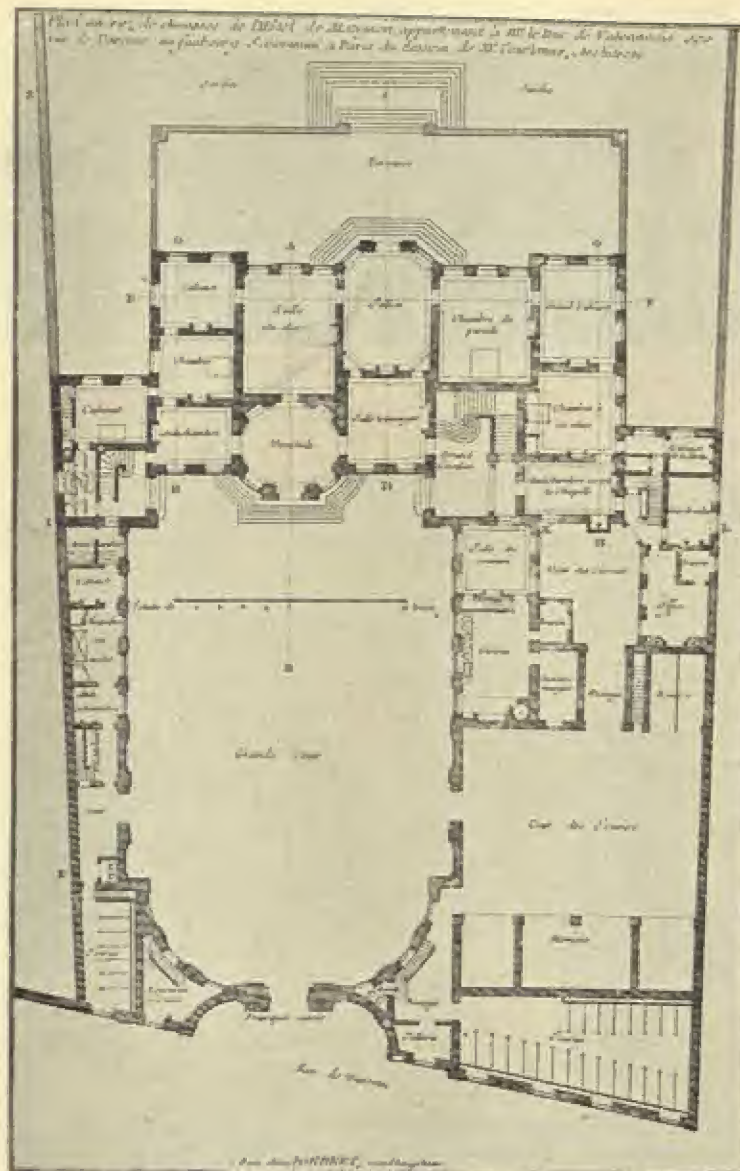


FIG. 6.—GROUND PLAN, HÔTEL DE MATIGNON, BY J. COURTONNE

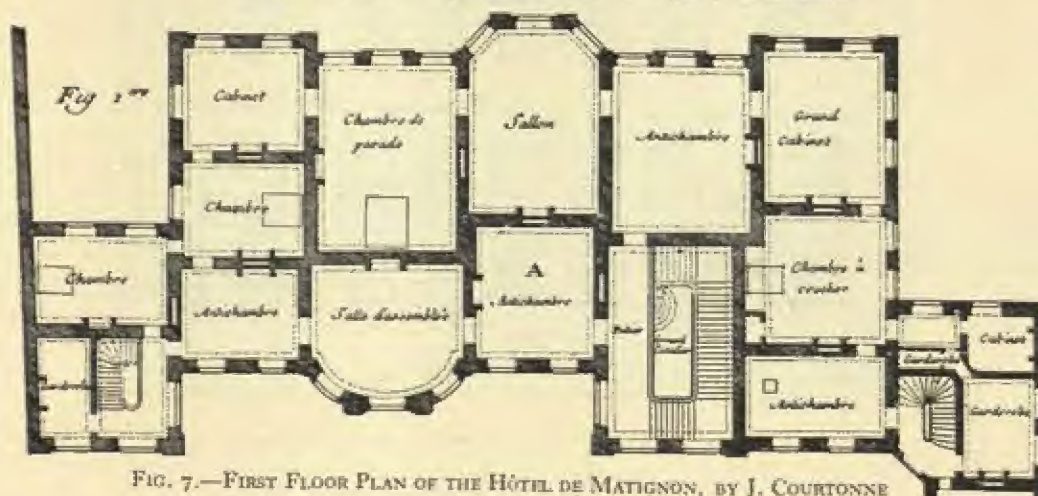


FIG. 7.—FIRST FLOOR PLAN OF THE HÔTEL DE MATIGNON, BY J. COURTONNE

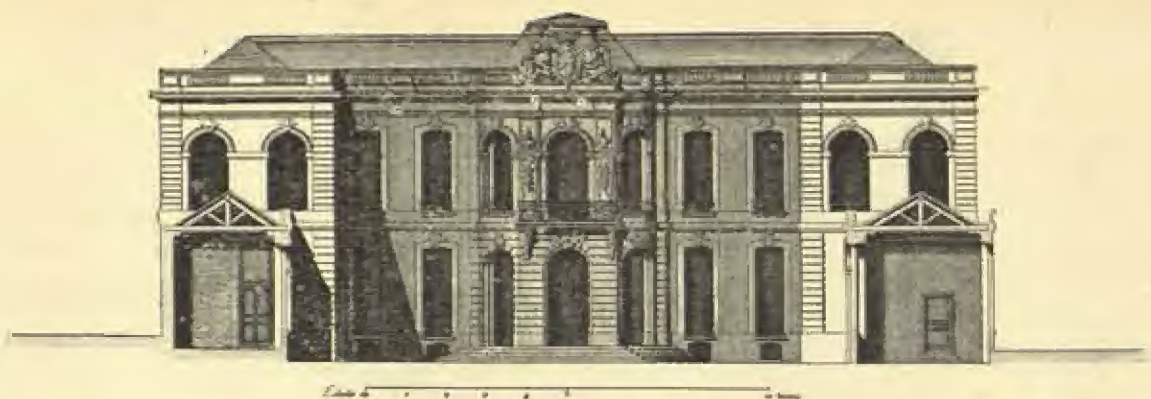


FIG. 8.—ELEVATION OF THE HÔTEL DE MATIGNON, BY J. COURTONNE



FIG. 9.—WEST ELEVATION OF S. SULPICE, PARIS, BY SERVANDONI

for the masonry of the Gobelins. Jacques Gabriel appears to have retired in, or soon after, 1684 to some property he owned at Villeneuve S. Georges, where he died, probably, in the autumn of 1686. His son, Jacques Jules Gabriel (1667-1742), became "*contrôleur général alternatif des Bastimens, jardins, tapisseries et manufactures du Roi*" in 1688, when he was only 21 years of age. And amazing as it may appear that this young man, with little or no training and experience, should be found among the principal officers of the royal buildings, the case is more understandable when we learn that his mother had bought the appointment from J. H. Mansart for the sum of 80,000 francs, and, as the latter was cousin to the widow Gabriel, "he no doubt exerted himself to cover up this disgraceful piece of nepotism." As at the time of the transaction in 1687 Jacques Jules Gabriel was a minor, the consent of his guardians—amongst whom were Gabriel Blanchard, painter and professor in the Academy of Painting and Sculpture; Chemet, "*contrôleur-général*" of "*rentes sur la clergé*"; Jacques Gabriel "*architecte*" and cousin of the future controller; and Jules Hardouin Mansart—had to be obtained. One of the ablest of the rising generation of architects, Jacques Jules Gabriel became controller at Chambord in 1694, and a member of the Academy of Architecture in 1699. His earliest work is said to have been the completion of Choisi, built after his father's design for Mademoiselle de Montpensier, although, as Sir Reginald Blomfield points out, it is possible that the design for the building was made by the younger Gabriel. The house designed by Jacques Jules Gabriel in 1707 in the Rue S. Dominique, Paris, for Madame de Varangeville, although neither an important nor an attractive building, shows a distinct advance in the planning of domestic buildings. For instance, its novel arrangement of the bedrooms and dressing-rooms, planned in an independent suite with a separate service staircase at one end of the building, and the position of the kitchen and offices in relation to the *salle à manger*, are great improvements on the planning shown in the house architecture of J. H. Mansart and other architects of his school. And another house, designed by Gabriel in 1728 for M. de Moras, and afterwards known as the Hôtel de la Duchesse du Maine, shows a still greater advance in domestic work. Here the "fine placing of the principal rooms *en suite* terminated by the oval rooms at either end; the arrangement of the bed-

room suites on both floors, the plentiful provision of service stairs, and even of corridors and passages—though the latter are very ill-lit—are developments undreamt of by De Cotte." As to the west front of the cathedral at Orléans, which was designed by Gabriel in 1726, Sir Reginald Blomfield is of opinion that, whilst as "a version of Gothic it is utterly wide of the mark, the sense of mass and proportion engrained in these eighteenth-century men saved the building from being ridiculous." Appointed "*premier ingénieur des ponts et chaussées*" in 1716, thenceforth Gabriel seems to have been extensively employed on large public works. Between the years 1717 and 1723 the bridge of eleven arches at Blois was constructed after his design, and another of his buildings carried out about this time was the Evêché at Blois. In addition to the great bridge at Blois, Gabriel designed the bridge of La Guillotière at Lyons, and those of Poissy, Charenton, Saint Maur, Pontoise L'Île Adam, Pont Saint Maxence and Beaumont. Other works by Gabriel include the admirable Hôtel de Ville at Rennes, situated to the west of the Place de Louis XV, and the Place de la Bourse at Bordeaux. Gabriel died at Fontainebleau in 1742, after a very successful career. He is described as being the ablest architect of his time, "perhaps the ablest that had appeared in France since the days of François Mansart. . . . Only one French architect in that century surpassed him, and that was his own son, Ange Jacques Gabriel." Contemporary with the elder Gabriel was the well-known architect Jean Courtonne (1671-1739), whose Hôtel de Matignon (Figs. 6, 7, and 8) is one of the most attractive designs in Blondel's collection.

Among the later French architects of the eighteenth century was Jean Gerome Servandoni (1695-1766), who, born at Lyons of humble parentage, studied architectural drawing and composition in Rome. Thence he is said to have wandered to Lisbon, where he designed the Italian theatre, and was made a Chevalier of the Order of Christ. In 1724 Servandoni was living in Paris, where he had a great reputation as a designer of stage scenery and effects. Eight years later he won the competition for the completion of the west front of S. Sulpice, upon which his reputation as an architect rests. The work was commenced at once, and, by special permission of the King, Servandoni was created by the Pope a Count of the Order of S. John Lateran. "In judging this design it has to be recollected that

the pediment, 120 feet wide by 26 feet high, which he designed for the centre, was never carried out, and that the existing towers are not his design. The merit of the west front is the unbroken entablature on a front of 184 feet, and its great scale (it is 126 feet high to the top of the balustrade), but it is an unsatisfactory design. It was not a very happy idea to divide up a front 126 feet high into two orders without any centre-piece or *avant-corps*. The pediment would not have composed very well with the towers, the treatment of the bays between the columns of both orders is commonplace, and the design, as a whole, shows little feeling for great composition, little of that genuine architectural sense which conceives of buildings not as screens or façades, but as masses."

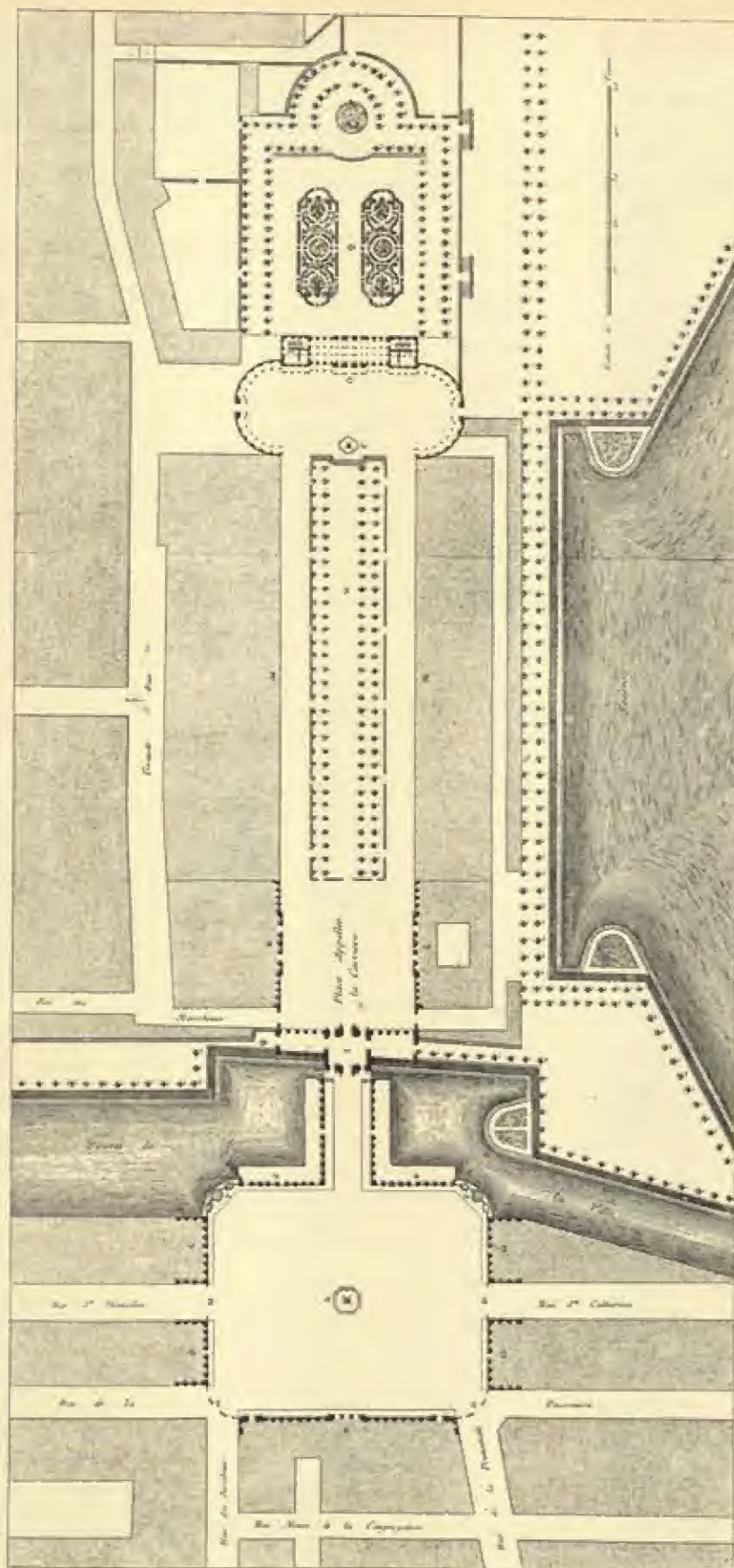
Although given many great opportunities, Servandoni's generous and hopelessly improvident characteristics led to his undoing, and the career of "*ce génie rare et excellent*" can only be described as a failure.

The name of Emmanuel Héré de Corny (1705-1763), who was born at Lunéville, will for ever be associated with his masterly work at Nancy, where, when Stanislas Leczinsky began his great project for linking up the old and new towns, Héré was appointed architect-in-chief. "At this date (1745) the two towns were quite distinct. The old town of Nancy to the north, founded by the Dukes of Lorraine in the twelfth century, was separated from the new town, established by the Grand Duke Charles III of Lorraine, by a wide unoccupied space, and though the outer moat ran round both towns, each town had its independent system of defence. . . . The problem before Héré was to link up the two towns. He began with the Place Royale, 360 feet by 300 feet, the south side occupied by the Hôtel de Ville, the east and west by two blocks of buildings separated by the Rue S. Stanislas on the west and the Rue S. Catherine on the east, these streets being aligned on the royal monument in the centre of the Place, and each terminating, at the farther ends, with triumphal archways. The south-east and south-west openings to the streets were screened by iron grilles, and the north-east and north-west angles, which, in fact, opened on to the old ramparts and moat, were filled with the admirable fountains of Neptune and Amphitrite by Guibal and the sumptuous ironwork of Lamour. On the north side, opposite the Hôtel de Ville, Héré placed two lower ranges of buildings, divided

by a roadway 60 feet wide between the buildings, running due north, under the triumphal archway, to the Carrière. This was a long open space, 810 feet long by 180 feet wide, with houses on either side. On the right hand stood the Hôtel de Craou, built from Boffrand's designs. Héré adapted this as government offices, and erected a corresponding building opposite on the left-hand side. He then designed a uniform façade for the buildings, on either side, up to the north end of the Carrière, where again he built two more important buildings or pavilions and laid out the Carrière as a promenade, with a lime avenue and groups of sculpture. At the north end of the Carrière he formed the 'Hemicycle,' a Place 300 feet out to out by 120 feet (the diameter of the Hemicycles), and on the north side of this he placed the Hôtel de l'Intendance, which, as originally designed, was open to the ground storey, so that the public passed freely through to the gardens beyond, laid out in the best manner of Le Nôtre, and free from any trace of the landscape manner. The whole scheme is delightfully simple and logical in its conception, and yet so varied in detail that it is full of unexpected charm."

The art of Ange Jacques Gabriel (1698-1782) "represents the culminating point of the tradition of French classic which started with De L'Orme and was already setting to its end when Gabriel died."

Ange Jacques Gabriel was the son of Jacques Jules Gabriel, one of the leading architects of his time, who had been ennobled through the influence of his all-powerful connection, J. H. Mansart. And it was owing, to a great extent, to the high professional reputation and influential friends of the older Gabriel that Ange Jacques at the age of thirty already occupied a high official position. Admitted to the second class of the Academy of Architecture in 1728, six years later, when Jacques Gabriel succeeded De Cotte as *premier architecte*, Ange Jacques became controller at Versailles and, subsequently, also at Choisi, both important appointments which brought the holder into close personal touch with the King. On the death of De Cotte, in 1735, Ange Jacques Gabriel succeeded him as an Academician of the first class, and, appointed "*architecte ordinaire du Roi*" in 1741, he became *premier architecte*, in succession to his father, in the following year. Having completed his father's work at Orléans and Bordeaux, Ange Jacques Gabriel was almost exclusively engaged upon the royal buildings until his retirement from practice in 1775. During



* FIG. 10.—GENERAL PLAN OF THE LAY-OUT OF NANCY, BY HÉRÉ

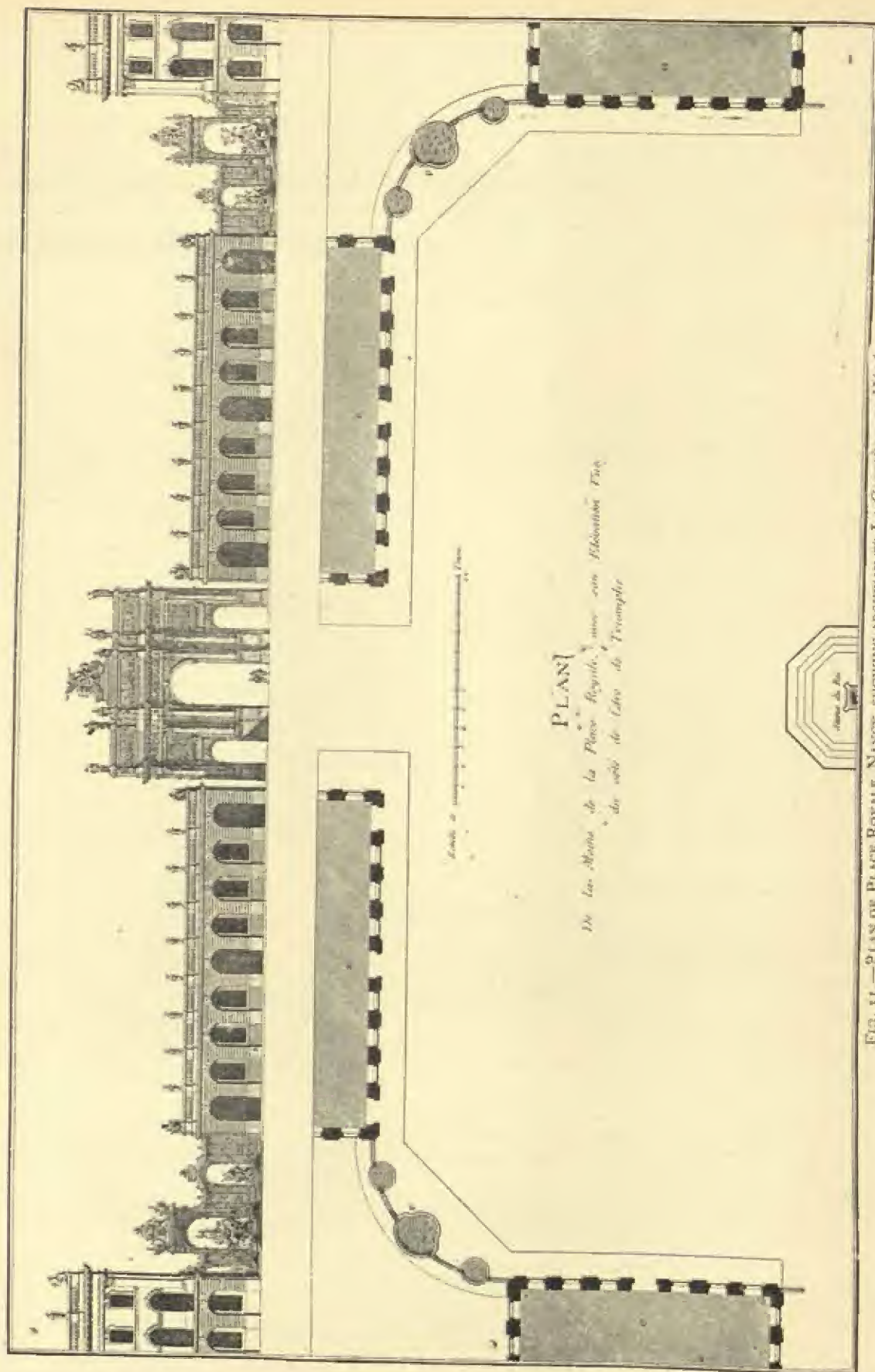


FIG. 11.—PLAN OF PLACE ROYALE, NANCY, SHOWING ARCHWAY TO LA CARRIÈRE, BY HÉRAULT

the thirty years or so that elapsed between his father's death and his own retirement Ange Jacques Gabriel was constantly called on to carry out alterations and additions at Versailles, Marly, Choisi, Compiègne, and elsewhere for Louis XV, who was almost as fond of building as his grandfather, Louis XIV. Meanwhile Gabriel had com-

tion with a central avenue following the axis line of the Tuileries gardens, an avenue to the left, known as the Cours la Reine, parallel to the river, and a corresponding avenue to the right. Gabriel's solution was to treat the whole Place as an *avant-cour* to the Tuileries gardens, but with openings, 150 feet wide, on the transverse axis, giving on the north

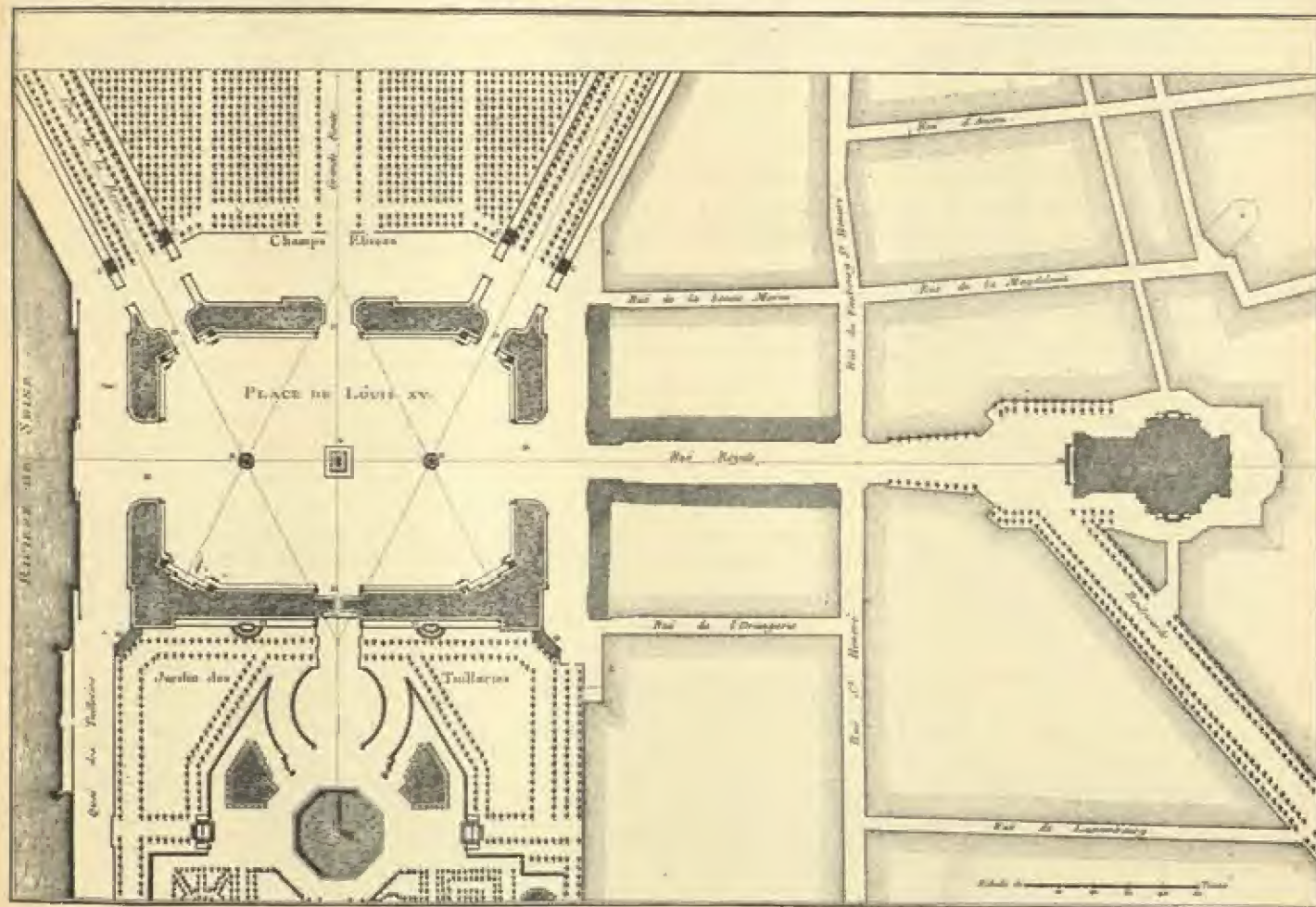


FIG. 12.—PLACE LOUIS XV. GENERAL PLAN, SHOWING GARDENS OF TUILERIES AND THE MADELEINE

menced one of his greatest achievements—the Place Louis XV, now the Place de la Concorde. Here the architect had to grapple with the problem of designing a great Place which should serve, on the one hand, as a setting for the King's monument, and, on the other hand, link up the gardens of the Tuileries with the Champs Elysées. "At that time the Champs Elysées were laid out as a formal planta-

side a vista through the Rue Royale to the proposed Church of the Madeleine, and on the south side to the bridge, both of which had yet to be built. The central space, forming the Place proper, measured 750 feet by 522 feet from balustrade to balustrade; beyond these balustrades were dry moats, about 54 feet wide and 14 feet deep, the bottom covered with grass. The moats were enclosed on both sides by

walls and balustrades with canted angles at the four corners of the Place, bridges at the north-west and south-west angles, and pairs of 'guerites' or sentry-boxes marking the angles. Beyond, and on either side of the north-west and south-west avenues of the Champs Elysées, were two-storey pavilions. Along the north side Gabriel designed the façades of the buildings extending from the Rue de la Bonne Morne to the Rue de l'Orangerie, with returns to the Rue Royale, on a plainer design as far as its intersection with the Rue S. Honoré. These buildings were begun in 1757-58, but proceeded slowly, and in January 1768 Gabriel wrote '*Je travaille fort et ferme au coin de mon feu*' at the designs for the Garde Meuble. It was a splendid scheme, and by far the finest thing of the kind yet done; indeed, it remains to this day unique in scale and boldness of conception."

In his masterly review of "French Architecture in the Reign of Louis XV" Sir Reginald Blomfield points out that in the eighteenth century architecture was regarded in France as the art *par excellence*, that its practitioners were held in high esteem, and that the tradition of the pre-eminence of architecture in the arts, established by J. H. Mansart, was carried on, by De Cotte, almost down to the time of the Revolution. Notwithstanding the esteem in which the art was held, comparatively few private houses of importance were built in Paris, and not many churches, the architectural output of the period consisting, in the main, of public buildings and some, generally well considered, schemes of town planning. However, a considerable amount of building went on in the provinces, notably in the cities of Bordeaux, Nantes, and Rennes, in which numerous examples of fine houses of the eighteenth century are to be found. These provincial houses, although carried out on a less ambitious scale, were planned on much the same lines as the contemporary hôtels of Paris. And throughout the country "a determined effort was made to increase the comfort and convenience of existing houses and to adapt them to altered schemes of life, not only in their decorations but in their plans." In his review of the reign of Louis XV, Patte alludes to the art of planning as being the most characteristic development of architecture in that reign. "Hitherto, he continues, architecture had been nothing but a mask. Everything had been sacrificed to external magnificence. Huge and comfortless interiors, rooms two storeys in height, enormous ballrooms,

galleries of interminable length, and staircases of dangerous width—there was no separate access to most of the rooms—all was designed for show in the great seventeenth-century country houses. But an improvement in internal planning set in about the year 1722—when the provision of private staircases, service stairs and passages, their adequate lighting, and the convenient planning of the kitchen and offices began to be considered of equal importance with the scheming of vistas." In his *Maisons de Plaisance* Blondel discusses the working arrangements of private houses in considerable detail. Some of the royal houses were provided with lifts for the service of suppers, and Patte mentions a patent reversible fireplace capable of warming two adjoining rooms. Mansart had spent immense sums on extremely uncomfortable buildings, but his successors did their utmost to provide their clients with houses fit to live in. The Palais Bourbon had its bathroom and heating chamber, and the plans of the Hôtel de Matignon, of the house for M. Jouvry, and of the Hôtel de Noirmontier, all show the advances made in the internal arrangement of domestic buildings since the days of Louis XIV. Concurrently with the insistence on improved planning came a great change in internal decoration. Eminently suitable as they were for the adornment of the great rooms and staircases of palatial mansions, the stately decorative efforts of Le Brun and Mansart were quite unsuitable for the *vie intime* of forty years later. Costly to maintain and oppressive in effect, the heroic paintings and heavy mouldings of the earlier period were unsuitable for the less formal and pompous, but far more cheerful and irresponsible life of the first half of the eighteenth century. All kinds of lighter decoration, fantastic in form, replaced the ponderous ornamentation of Louis XIV. Ornamental ceilings enriched with "*frises et de toutes sortes d'ornemens agréables*" concealed the beams of the floors, and mirrors took the place of the pictures or bas-reliefs which formerly were found over the mantelpieces. As to church building, comparatively little was done. "The last great efforts of the seventeenth century, Mansart's Church of the Invalides and the Chapel of Versailles, were completed before the death of Louis XIV, and it is only fair to say that in both these buildings Mansart, or his associates, broke away from the Italian model and showed that French architects had little to learn from Italy in the way of church architecture."

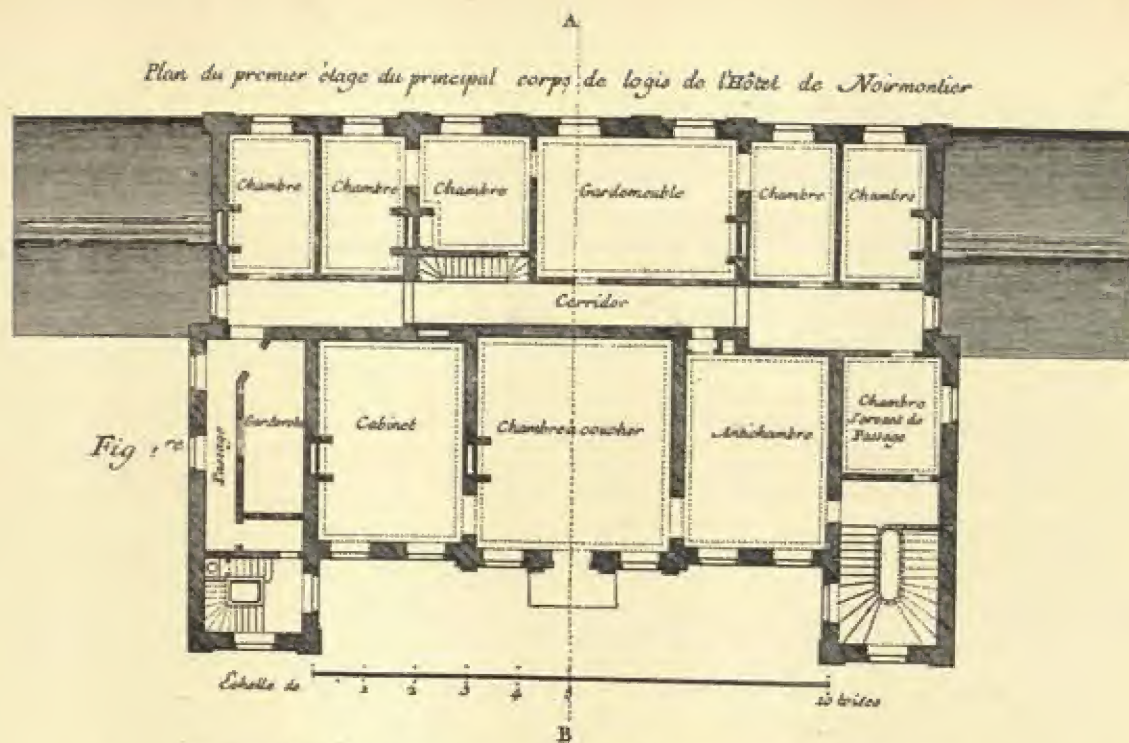


FIG. 13.—FIRST FLOOR PLAN OF THE HÔTEL DE NOIRMONTIER, BY J. COURTONNE

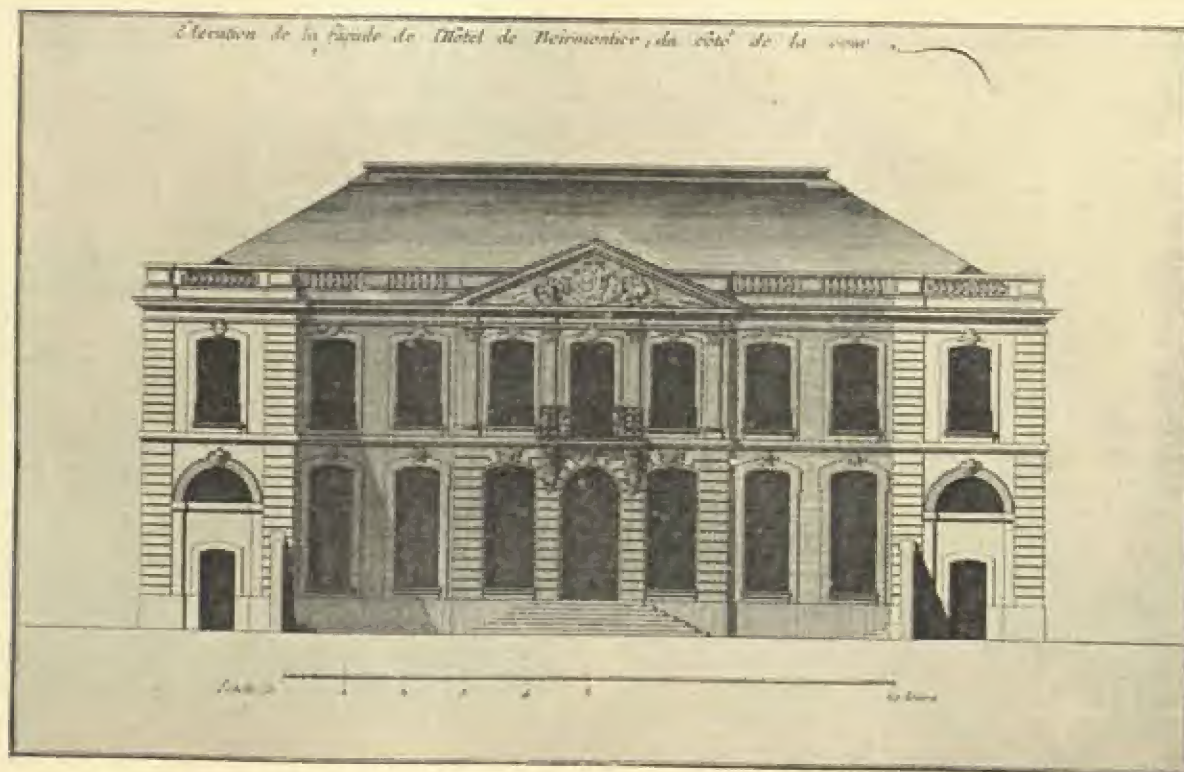


FIG. 14.—ELEVATION OF THE HÔTEL DE NOIRMONTIER, BY J. COURTONNE

Sir Reginald Blomfield makes no apology for closing his history of French Renaissance architecture with the death of Louis XV, as he regards the ensuing Classic revival associated with the successive periods of the Revolution, the Consulate, and the First Empire as being altogether wrong in principle. And he points out that the revival of the antique in its most literal and pedantic form opened the way for these other revivalists, Gothic, free Renaissance and what not, who have since reduced the art of architecture to a game of battle-dore and shuttlecock," or, as is suggested elsewhere, "to the level of stage scenery." In his introductory remarks the author makes some very wise and apposite comments on scholarship and the modern architect which *all* members of the architectural profession, young or old, would do well to take to heart.

"An architect must be perfectly acquainted with the terminology of the past, just as before a man can write in any language he must be master of its vocabulary, its idioms and its grammar—and it is here that modern architecture too often fails. . . . there are too many buildings about that show no knowledge of antiquity and resemble too nearly the literary efforts of an uneducated and illiterate person. Unfortunately these architectural efforts remain the *littera scripta* of bad taste and ignorance. The revivalist thought he had mastered the problem of architecture if he made no mistake in his orders or in his tracery, but he did at least study closely, if rather stupidly, and at his best he produced some scholarly exercises in academic design. He was an enthusiast in his way, not a tradesman; in any case, he was on a different footing from that of the man who plunges recklessly into design without serious study of its technique, and blunders about into solecism after solecism with indifference and even unconsciousness that he is doing anything of the sort."

"Nowadays technical competence in the art (of architecture) is not so zealously sought for or attained as it undoubtedly was, both in France and England, in the eighteenth century, and it has been reserved for the twentieth century to produce its own peculiar imposture. Practitioners of the arts have presented themselves who repudiate the whole of the past, and make out of their own ineptitude the canons and standard of art."

Sir Reginald Blomfield's description of J. H. Mansart as "a most capable but unscrupulous man, a bad artist, and perhaps the most conspicuous

example of the architect *entrepreneur*, of the man whose heart was set, not on great architecture, but on a great position, and a lucrative practice," is probably true. And I agree that the general level of Mansart's work at Versailles is "frigid, monotonous and uninspired." But I also think that to imply, as the author does on page 185, vol. i, that Mansart was "a robust, aggressive, full-blooded vulgarian" is not quite fair, because, admitting that Mansart was not an architect in the proper sense of the term, and as such was incapable of designing the buildings he was commissioned to carry out, yet, after all, he had the wisdom and strength of character to recognise his own limitations, and by entrusting the actual designs to abler men they attained a standard of merit that otherwise might well have fallen far lower. And I think we should be reasonably grateful to him for this self-restraint, more especially when we recall the numerous occasions upon which the Mansarts of our time and country—in their misplaced self-confidence—have piled the Ossa of architectural vulgarity on the Pelion of architectural ignorance and ineptitude, with results that would be regarded with contempt by their French prototype of the seventeenth century.

In *The History of French Architecture from 1494 to 1774* Sir Reginald Blomfield has produced a great monumental work which is destined to instruct and delight generations of architects. As a literary effort, it places its author head and shoulders above any of the writers on architecture of his own time and country. Whilst supreme in its masterly demarcation, co-ordination, and explanation of the sequence of political and other events that influenced, each in its individual manner and degree, the introduction and development of Renaissance architecture in France, the artistry of the writing is almost equally remarkable. Profusely adorned with reproductions of contemporary engravings and the author's drawings, many of the pages of this great book afford clear and irrefutable evidence of the vast amount of time spent by its writer in preliminary study and research—in sifting, and accepting or rejecting, variable statements gleaned from the memoirs or other documents of old-time writers, and in anxious judicial consideration resulting in freely expressed impartial opinions and convincing criticisms.

The Editor desires to acknowledge his great obligations to Messrs. G. Bell & Sons for their kindness in lending the original blocks from which the accompanying illustrations have been reproduced.

A Plea for a Broader Conception of Architectural Education

By W. S. PURCHON, M.A. [A.]

Head of Department of Architecture and Civic Design, the Technical College, Cardiff.

Chief among the factors which render happy the life of the architect is the sure knowledge that all those who do not belong to the profession are amateur architects of sorts. Similarly the joys of the teacher are considerably enhanced by the fact that all non-teachers are amateur education experts. It will thus be seen that far more than twice blessed are the lucky individuals who have made architectural education their walk in life, for they have not only the assistance of the amateur architect and the amateur educationist, but also of the professional teacher who is an amateur architect and the professional architect who is an amateur educationist. From the latter class we have clearly had the most assistance, and the most criticism, sometimes destructive, sometimes constructive, sometimes both, but always friendly and always interesting.

It was my misfortune to be unable to accept the invitation to hear Mr. Colcutt's "plea for a broader conception of architectural education." Some of his criticisms require definite answers, and these were doubtless forthcoming at the meeting. May I, however, venture to comment on some of his points while still in ignorance of the views expressed by others?

1. Mr. Colcutt criticises the schools for encouraging yet more students to enter and to complete their courses before finding architecture is not their bent. As a matter of fact, the schools are a great instrument for good in this direction. The concentration of students in schools does not necessarily increase their number, but it makes the number more obvious.

2. Some of the schools are charged with the offence of presenting a "portentous curriculum," requiring an exquisite skill in geometrical drawing and of considering more than the rudiments of steel construction, sanitary and electrical work. The former part of this charge is not uncommonly followed by suggestions the acceptance of which would make the curriculum foreshadow even greater ill, while the latter part of the charge is usually reversed, and comment on it is made difficult by the apparent approval which our critic gives to a quotation from a letter received from an old student of one of the schools in which he says: "I sometimes feel I wasted years as a student, where we were taught nothing but design in the Classic manner, no building construction to speak of (lately this has improved), and an endless amount of history."

I should love to see a detailed syllabus of a rudimentary course in steel construction from which the calculation of the dimensions of a steel floor girder carrying

a distributed weight was excluded on the grounds that practising architects do not practise expert engineering!

3. "Throughout the whole curriculum architecture as a Fine Art seems to be almost a secondary consideration." Here again is practically the reversal of the usual charge we have to meet. We must at least thank Mr. Colcutt for the excellent replies he is helping us to give to the other set of critics when they come along in a week or so!

4. "'Presentative technique and rendering' is good." Here Mr. Colcutt clearly scores, but hardly a "knock-out."

5. "It is pleasant to find extremely good designs done by students." This is praise indeed from a man of Mr. Colcutt's ability, but why should our critic assume that these students have "wisely ignored the greater part of the curriculum"? Surely he should consider this work as a product of the school system as such.

6. "And there you are—fully equipped to suck the blood of the first client caught in your web of theories and coloured perspectives."

If the normal claim of the schools was that the students who leave them are "fully equipped," the above would be delightfully amusing fair comment. I think, however, that not only are such students at least as well equipped as those who have spent a similar time in the older method of commencing an architectural education, but that they are better prepared for continuing it, and I believe that latter point is one of the main claims of University and similar forms of higher education.

7. "Concentration on palatial buildings." While there is a great deal to be said in favour of this system, and Mr. Colcutt says some of it extremely well in his closing paragraph, I think on the whole he scores here again, and that we might spend rather more time on "subjects of a domestic or business or a civic character and on possible sites."

8. "The public is dangerously misled. A drawing that is pleasing to the eye, well coloured, and artistically put down, gives to the untrained observer the impression that the architecture must necessarily be good." What is the moral? Are we to make displeasing drawings so that the untrained observer will assume that the architecture is necessarily bad? Or are we to remember that such drawings are usually examined by experts who are not easy to deceive by "camouflage"? As a matter of fact, in the case in question we have Mr. Colcutt's own opinion that the "architecture is happily designed." And a little later our critic tells us he has no quarrel with the making of beautiful drawings. So the criticism is really a condemnation of bad design, and here we can easily all agree. I believe, too, that most of us are of opinion that on the whole the tendency of the schools has been to raise the standard

of design among students, and surely this is the main point. Mr. Colcutt suggests means by which a broader education may be attained during student days.

(a) "Students should aim at getting a good knowledge of sculpture and painting." As Mr. Colcutt said near the beginning, "there is a lot more to learn!"

(b) "Students should enter upon a course of reading, choosing the best literature, both prose and poetry." Excellent advice!

(c) "Students should train the faculty of observation." Here we must all thank Mr. Colcutt for backing up our efforts in this direction.

(d) "The important work of measuring and plotting old examples of architecture." We can all agree—this is work which the schools have steadily encouraged.

(e) "Students should visit the Acropolis." I do not think anyone engaged in the work of the schools would say a word in opposition.

(f) "In studying old buildings keep an open mind and do not be led away by a style that may be fashionable for the time being." The main thing here, I venture to suggest, is that the student should work on buildings which really interest him.

(g) "Do not consider all the old masters infallible." This is, of course, very sound. We should at least learn to avoid the mistakes of those who preceded us. If we tackle our history in this spirit, we shall not "weave patterns or samples expressing some of the evils and little of the good pertaining to the old masters."

(h) "The art of building is being revolutionised by the advent of steel and concrete construction, so that we no longer build brick walls to carry weights. Thickness sufficient to resist the effects of cold and heat is all that is necessary. Young men, therefore, may indulge in visions of a style born of tradition and adaptable to the new construction. But their visions should be exalted: they must not be confined to the mere work they are engaged upon."

This is surely one of the most important statements in a valuable paper. If we consider the earlier part of Mr. Colcutt's contribution in the light of his last paragraph, I think we must conclude that we are all far more nearly in agreement than might have appeared to be the case at first.

The Parthenon

The Times of the 19th inst. contained an important pronouncement about a proposed restoration of the Parthenon, which had been referred to in the issue of the previous day, under the heading, "The Parthenon in Danger." It is as well that timely reference should be made to this in the *Institute Journal*, but as the whole question of the "restoration" of such a subject as this is fraught with great difficulty, one must proceed with caution at this stage. There are certain things that might be pointed out. To begin with, let us fully recog-

nise the rightness of everything said by Prof. Ernest Gardner, as quoted in *The Times*, with one very trifling exception perhaps, the actual practicability of reinstating the pediment groups (if such a drastic step were taken) in their original positions; as he himself would at once agree, such procedure would be quite possible if modern engineering methods were employed. Mr. John Penoyre is also quoted, and he rightly referred to the Erechtheion as an example of restoration, adjacent to the Parthenon, already accomplished. But it should be borne in mind that the Erechtheion does not offer a true comparison. There, the case for restoration was built up on the fact that a very considerable proportion of the original stones of the north porch which were not in position were on the ground; and, in addition, as Prof. Gardner has informed me, French engineers, in the first half of last century, had worked some of the remaining stones of the same porch for the express purpose of restoration. There is nothing comparable to this in the case of the Parthenon. The number of fallen fragments of structure on the ground or in museums is comparatively small; and, moreover, the Greek authorities have already re-erected some of the column drums on the north side.

Prof. Gardner states that this work and also the restorations of the Propylæa have been well done. I have no doubt that this is correct, but I cannot speak from personal knowledge on this point, as my last visit to Athens was in 1908, when the works at the Propylæa were barely begun. To conclude, I would ask three questions:—

1. Apart from Governmental considerations, would the removal of the Elgin Marbles to their original positions be worth the very grave risk of discovery, when it was too late, that they were better, after all, in the British (or any other) Museum?

2. Would any attempt at complete restoration of the building be advisable, in view of the known divergencies of opinion on such questions as the lighting and structure of the interior?

3. Sublime as a ruin, the Parthenon has been known as such to the entire civilised world for generations. To all thinking men, it has been consecrated by the sincerest expressions of admiration from some of the greatest minds of modern times. Its actual safety and repair must be assured, but is it advisable, without the most careful consideration, to tamper with the majesty of its appeal as it now stands? THEODORE FYFE [F.J.].

PRESENTATIONS TO MR. TAYLER AND MR. NORTHOVER.

The President will attend the Institute on Wednesday, 1 February, at 4.30 p.m., to present to Mr. H. G. Tayler, the late Assistant Secretary, and Mr. George Northover, the late Editor, testimonials from members of the Institute in recognition of their long and honourable service.

Reviews

THE RECORDS OF ST. BARTHOLOMEW'S PRIORY AND OF THE CHURCH AND PARISH OF ST. BARTHOLOMEW THE GREAT, WEST SMITHFIELD. By E. A. Webb, F.S.A. Two vols. Royal 8vo. £3 3s. net.

This admirable book is brimful of interesting, curious and reliable information, and is the well-considered result of many years of learned research. In the author's own words, it is "an endeavour to present, in a form intelligible as well to the unlearned as to the learned, the records of the monastery and of the parish church in historical sequence from the time of the foundation of the priory in 1123 to the present day."

The author, who is the elder brother of Sir Aston Webb, informs us in the preface that he undertook this great work primarily because he was appointed Honorary Secretary to the Restoration Committee and Rector's Warden in 1884, his appointment being, he modestly supposes, due to his and his family's long association with the parish. Apparently he has filled these dual offices ever since, which must surely constitute a record.

A partner in a large wholesale firm in Bartholomew Close, he has only been able to devote his short leisure time to the research necessary to write so complete a book. That it has been a labour of love is evident from the extreme thoroughness with which every subject has been dealt with.

The first volume is mainly historical, and chapters are devoted to the monastery, the Augustinian order, the priors and rectors, the founder and the hospital. Each century is then dealt with in successive chapters, and the various events related down to the suppression in 1539, the resuscitation by Queen Mary, and the second suppression by Queen Elizabeth. An interesting account of Bartholomew Fair is given, with its quaint manners and customs.

There are very clear photographic reproductions of the Founder's Tomb, and of black-letter documents such as Rahere's Charter to Hagno, 1137; the ordinance of Richard de Ely, 1198; a portion of the will of Henry VII; and the Deed of Surrender, 1539. The seven delightful conventual seals are also well illustrated.

The second volume is on the fabric of the church; the monastic buildings; the parish; the rectors and their times from the sixteenth to the twentieth century; lists and illustrations of the monuments in the church, with their heraldry and inscriptions; inventories of the church plate, organs, etc., and parochial records; and in the appendix are printed the architects' reports on the restorations of 1863 and 1885, with other information.

Plans and sections of the church by Sir Aston Webb

as it now exists are reproduced, with the dates clearly indicated of the walls and piers. Rahere's work (from 1123) consisted of the apse with its ambulatory; three bays of the quire; its aisles; the north and south chapels, and the Lady Chapel. His successor, Prior Thomas, built another bay of the quire, the crossing, transepts and one bay of the nave. The nave and aisles were erected 1230 to 1240. Soon after the completion of the church various alterations began to be made: the eastern chapel of the south transept was rebuilt as a sacristy—the Lady Chapel was also rebuilt on a larger scale in 1335 and either late in the fourteenth or early in the fifteenth century, the apse of the quire was converted into a square east end—the clerestory of the quire was taken down and rebuilt, and the Founder's tomb erected. About a hundred years later Prior Bolton inserted his oriel window in the south triforium of the quire and his doorway and square termination to the ambulatory on the south of the Lady Chapel.

The monastic buildings were preceded with, the author states, after the completion of the conventual quire and before the building of the nave. An interesting plan of the priory at the time of the suppression is given, and little that is shown thereon is conjectural. The general arrangement of the buildings was on the usual Augustinian plan and on the same lines as many well-known examples. Like all these conventual layouts, it is an admirable example of planning, in which convenience of position and good aspects have evidently been carefully studied. The open spaces allotted to the Fair ground, the garden within the Close, and the Close itself make one wish they were still unbuilt upon.

After the suppression the monastery suffered much. The nave, transepts and parish chapel were pulled down and the building material used by Henry VIII; the quire was converted into a parish church, and walls were built up in the north and south arches of the crossing and to enclose the first bay of the nave at the western end. The monastic buildings were converted into private dwelling-houses—the Lady Chapel, the dormitory, refectory, and infirmary being divided up by means of floors and partitions—and the cloister garth became a garden.

An interesting plan of the parish as it was early in the seventeenth century is given, based upon old maps and a very complete survey made for Lord Holland of his possessions in 1616. The surveyor's descriptions are most explicit, and show that, during the seventy years that had elapsed since the suppression, the walls of the conventual buildings still remained unaltered although adapted internally. It is sad to learn that the old dorter, with its vaulted undercroft and fine timber roof, was pulled down as late as 1870!

Plans of the church as existing prior to Sir Aston Webb's restorations are also reproduced, and there are complete photographic plates of the interior and ex-

terior of practically every part, copies of ancient maps, plans of the church and surroundings by Thos. Hardwick in 1791, and many illustrations from old prints of the interesting old houses in the precincts. The two volumes are tastefully bound, beautifully printed by the Oxford University Press, and the illustrations are exceedingly well reproduced.

This great work will certainly be the standard authority on St. Bartholomew the Great and all relating thereto; it is a book which every lover of Old London would like to possess and every reference library of any importance ought to acquire.

JOHN E. NEWBERRY [A.].

Sir Charles Ruthen and National Housing

The attention of the Council of the Royal Institute of British Architects having been drawn, during the meeting held on Monday, 23 January, to the address recently given by Sir Charles Ruthen, it was resolved that publicity be given to the following resolutions in reference to the grave charges and insinuations contained in that address:—

1. That regarded as the utterance of the President of the Society of Architects, this Council considers that it has been adequately and appropriately dealt with by the Council of the Society.

2. If it may be viewed as the utterance of a Government official, the opinion of this Council is that it is an undignified departure from the best traditions of the Civil Service, as well as an unwarranted attack from an official quarter upon a whole profession whose interests the R.I.B.A. is pledged to protect, and those in higher authority are invited to give consideration to it.

3. That though the charges are so general and expressed with so much animus as to be unworthy of serious attention, the Council, in view of the fact that they were the utterances of a Fellow of the Royal Institute, has called upon Sir Charles Ruthen either to present to the Council such definite allegations as will enable it to take its own proper action or to tender a complete withdrawal.

SOCIETY OF ARCHITECTS AND SIR CHARLES RUTHEN.

At a Special Meeting of the Council of the Society of Architects held on 18 January, 1922, a resolution was carried unanimously that they disassociate themselves from the views expressed by Sir Charles T. Ruthen, President of the Society, in his Paper on "The Architect and the State," particularly as to the responsibility of the architectural profession for the failure of the National Housing Scheme, and from the implications as to profiteering by architects in connection therewith.

Correspondence

SIR CHARLES RUTHEN'S CHARGES AGAINST ARCHITECTS.

18 January 1922.

To the Editor, JOURNAL R.I.B.A.,—

SIR,—Sir Charles Ruthen has set out to defend the Ministry for which he is acting by throwing discredit on the members of his own profession. He holds the office of President of the Society of Architects, and also that of Director of Housing under the Ministry of Health. It can hardly be thought that he is speaking as an architect in making his attack: it is too ill-founded and inaccurate for that to be the case, and it is gratifying to hear that the Society of Architects is taking prompt steps to deal with Sir Charles Ruthen's pronouncement.

His contention that architects are to blame for the high cost of housing is entirely without foundation, for the standard of housing, based on that advocated in the Tudor Walters Report slightly lowered, was imposed by the Ministry from the outset. The details of accommodation and construction were set out and insisted on by them. They prescribed the areas of rooms, the number of houses to the acre; they issued model plans; they made model specifications, and they reviewed and revised the plans submitted to them in minutest detail. The architects on their part studied the problem with scientific precision in order to secure economy of material and arrangement: the gables that Sir Charles deprecates were used in order to save brickwork by lowering the main walls rather than for the purpose of artistic effect.

By degrees, as prices increased, the Ministry reduced their own standard to some extent, omitting bedroom cupboards and fireplaces, depressing roof slopes and cutting down shelving and other small items to an absolute minimum. The high prices were due on the one hand to the labour policy of the Government, and on the other hand to interference by the Government with the normal manufacture and supply of materials; they were no more due to architects than to stockbrokers.

A very telling instance of the effect of interference with the supply of material comes recently from Colchester, where the Housing Scheme was approved upon condition of the bricks being obtained from the D.B.M.S., and these bricks are costing 12s. 1d. per thousand above the open market price.

It would be easy to fill many of your columns with a discussion of the Housing matter from the architect's point of view, but my purpose in writing is to protest against excusing the abandonment of housing by allocating to architects the blame that belongs entirely to the ill-advised policy of the Government in the matter of wages and the supply of building material. Labour must not be blamed because its political weight is great; builders must be handled gently because their

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vote is a large one ; architects are few, and may safely be shot at, but the shooting should not be done by one who claims membership of the profession.

As far as the accusation of profiteering is concerned, I need do no more than remind Sir Charles that the fees we agreed with the Ministry are rather less than one-third of our ordinary fees, and that he himself was one of the deputation by whom the arrangement with the Ministry was originally made.—Your obedient servant,

ARTHUR KEEN [F.],
Hon. Secretary R.I.B.A.

ARCHITECTURAL EDUCATION—JAMES GIBBS AND ROBERT ADAM.

*Sir John Soane's Museum,
13 Lincoln's Inn Fields, W.C.2.
17 January 1922.*

To the Editor, JOURNAL R.I.B.A.,—

SIR,—In the interesting discussion on Mr. Coileutt's Paper, Mr. E. T. Hall, F.R.I.B.A., speaking no doubt from memory, gave, I believe, a false impression of the careers of James Gibbs and Robert Adam, on which he will not mind, I am sure, the following comment.

As regards the first, *The Architectural Dictionary* says that he placed himself with C. Fontana at Rome. It is true that the writer has used the word "school," but I imagine it must have been more like what we should describe as an office—just as, in fact, James Wyatt was six years with Vicentini at Venice later on.

That Robert Adam ever was at Paris "under Clérissseau" is, as far as I know, without serious authority. To the best of my knowledge, after going to Edinburgh University at the age of 15, he remained in touch with his father's office until he went abroad in June 1754. Wm. Adam, senior, had died in 1748, when Robert was 20, but John, the eldest son, carried on the practice. Robert was 26 when he left for Italy, and 30 when he returned to start practice in London, January 1758. I have no evidence of any stay in Paris on the way out, and he returned by the Rhine, the Seven Years' War with France having begun in 1756. That is an outline only, and all the details that I have been able to trace will shortly be published.

Clérissseau was invited by Robert to accompany him as a draughtsman on the expedition to Spalatro in 1757, and later on James Adam, the third brother, between 1760-63 also engaged his services. A contemporary artist in Rome speaks of him in 1761 as "Adams, the architect's brother, with his director, Monsieur Clérissseau, set up a manufactory of Virtu employing painters, engravers, architects, etc."; and he then relates an anecdote of one of the students. There are in the Soane Collection a sketch design by Robert, and a finished painting, clearly made from it, by Clérissseau, and I regard these as proofs of the relative position of the two.—Yours faithfully,

ARTHUR T. BOLTON, F.S.A. [F.], Curator.

UNIFICATION AND REGISTRATION.

*45 New Bond Street, W.1.
10 January 1922.*

To the Editor, JOURNAL R.I.B.A.,—

SIR,—In reply to the letter from Mr. Arthur Keen that appeared in the last issue of your JOURNAL, we beg to remind him that no amount of sophistry can alter facts, and that, at the moment, we are not dealing with the report of the Sub-Committee to which he refers, with which—according to his own showing—the resolution of the Council is at variance. We agree with Mr. Keen that the first of the resolutions passed by the Unification and Registration Committee, and subsequently adopted by the Council of the R.I.B.A., defines the scheme in the following words :

"That the principle of scheme A—namely, the bringing of all the architects of the United Kingdom into membership of the R.I.B.A.—be adopted as the basis for Unification."

Not only is there no suggestion of any test or qualification in the above resolution, but, in addition, the introduction of the word "all" provides for the admission to the R.I.B.A. of every individual member of the architectural profession in the United Kingdom who desires to enter.

Finally, if as Mr. Keen insists, the above resolution of the Council does not mean what it says, then it is the duty of that body to make its policy clear to outside members of the Institute. But, until this is done, it is equally the duty of those interested in the welfare of the R.I.B.A. to point out the dangers and difficulties it will have to face, consequent upon the action of its governing body, in supporting and adopting the present anomalous and mischievous proposal.—Yours faithfully,

GEORGE HUBBARD [F.],
ALFRED W. S. CROSS [F.], Vice-President.

*15 Great James Street,
Bedford Row, W.C.1.
23 January 1922.*

To the Editor, JOURNAL R.I.B.A.,—

SIR,—The above-named subject is of such interest to architects generally that I feel disposed, if you will allow me, to "butt in" with a few remarks thereon.

I have perused the correspondence which has appeared on the subject in the R.I.B.A. JOURNAL and in the professional journals, and have arrived at the conclusion that the proposition is at present of an indefiniteness that fully justifies a demand for greater clarity.

Is it, or is it not, the accepted policy of the R.I.B.A. Council to attempt to gather into the fold of the Institute, subject to certain protective provisions, all architects now outside that fold, and to permit this before "Registration" is certain of attainment ; and if certain of attainment, is it known how long an interval of time will elapse between certainty and achievement ?

JOURNAL OF THE ROYAL INSTITUTE OF BRITISH ARCHITECTS

A recent pamphlet, signed by Messrs. Cross, Searles-Wood, Hubbard, and Perks, contains a letter from Messrs. Sherwood and Co., parliamentary agents, in which the latter state that in their opinion it would be "impracticable at the present time to obtain legislation on the lines you propose."

If that be so, the inadvisability of opening our doors at the present time is too obvious to need more than utterance of the statement itself.

The idea appears to be that a Board should be set up, apparently as the sole judge of the qualifications of a candidate for admission. The question may be properly asked whether the Institute is to be satisfied with the decisions of this Board, or is the General Body to be allowed an opportunity of objecting to the admission of a candidate passed by the Board; and is the consideration of qualifications by the Board to be the sole "test and examination" for admission, and, if not, what further is intended?

One's mind would be, perhaps, relieved if the proposed Board would specify, clearly, the general headings of the qualifications, without which the Board would not be able to pass a candidate for admission!—I am, Sir, yours faithfully, WM. WOODWARD [F.].

9, Gray's Inn Square, London, W.C.1.
10 January 1922.

To the Editor, JOURNAL R.I.B.A.,—

SIR,—I have read with interest the many letters appearing under this heading. I think it would be difficult to improve on Mr. R. G. Wilson's letter—which, incidentally, confounds Mr. Sydney Perks' materialistic argument—and hard to find anything more reactionary than the clever letter of Messrs. Hubbard and Cross, which ends with a deplorable appeal to selfish instincts.

If, as most correspondents maintain, they have the interests of the profession at heart, what is the sacrifice (if sacrifice there be) of one generation in comparison with the duration of the profession? If the same view had been taken of the war, there would have been no volunteer army.

Surely those members who plead the "considerable sacrifice" (sacrifice apparently by the torture of examination) as an excuse for resisting unification must have poor confidence in the superior qualifications they have gained by this terrible sacrifice.

I believe that to include within the fold of the R.I.B.A. all architects of the United Kingdom would probably have a completely beneficial result. The R.I.B.A. itself would be the gainer by obtaining the interest and opinions of those trained outside its regimen, a body from which it now hears no expression of opinion. Those in this way joining the R.I.B.A. will undoubtedly feel that they have become members of a body carrying the highest tradition of professional attainment, and therefore affording the best service to

the public; and all but those whose outlook is wholly selfish will endeavour to become, if they are not already, worthy of a strong, united profession.

We seem in danger of laying ourselves open to the charge that

We are the true selected few;
The rest may all be damned.
There's only room for me and you:
We can't have heaven crammed.

Yours faithfully,
A. J. HEALEY [F.].

To the Editor, JOURNAL R.I.B.A.,—

SIR,—In view of the heart-burnings caused by some of the proposals now before us I beg to suggest the following as a simpler solution of the consolidation problem:—

The Society of Architects to unite its organisation with that of the R.I.B.A. in Conduit Street.

Students of the Society of Architects to become Probationers R.I.B.A.

Members and Fellows of the Society of Architects to hold their present titles at their present subscriptions, but to share R.I.B.A. privileges and premises, and no more of them to be elected.

Unattached architects to be dealt with in a Registration Act: they would be entitled to call themselves "architect," but would not have letters after their names unless they cared to become A.R.I.B.A. by examination or F.R.I.B.A. by nomination (as they can do at present).

The Institute to consist of two permanent classes (Fellows and Associates) and two expiring classes (M.S.A. and Lic.R.I.B.A.).

Would it not be better to start with such a scheme as the above, instead of sacrificing our present status on the off chance of inducing unattached architects (most of whom are quite happy in their present state) to join and subscribe to the R.I.B.A.?—Yours faithfully,

H. L. HONEYMAN [A.].

375 Union Street, Aberdeen.
18 January 1922.

To the Editor, JOURNAL R.I.B.A.,—

SIR,—I observe in your issue of 14th inst. a criticism of my letter of 5th ult. by Mr. F. R. Hiorns.

Several of his assumptions and conclusions are erroneous, but I do not propose to traverse all the ground again, which should, in this year of grace, be well known to us all.

Mr. Hiorns is evidently opposed to control, by Act of Parliament, of the education and certification of architects, while I am in favour of it, and I shall support all endeavours by the R.I.B.A. to attain this end, and hope their efforts will be successful.—Yours faithfully,

ROBT. G. WILSON, JUN. [A.].

Ernest Newton, R.A., C.B.E.

25 January 1922

All who knew him will hear with the deepest regret of the death of Ernest Newton. He was attacked by influenza at the end of last week; pneumonia supervened, and he died early this morning. The severe operation that he underwent two years ago must have sapped his vitality. I went to see him in the nursing home at that time, and have never forgotten the courage and cheerful humour with which he faced it and his long and troublesome convalescence.

Newton was a man who endeared himself to all who knew him. Kindly, sympathetic, extremely intelligent, he concealed under a genial manner an emotional and very sensitive nature; a man who had the rare faculty of listening to others and placing himself at their point of view. I made his acquaintance many years ago in the old days of the Art Workers' Guild, when Macartney and Gerald Horsley were the secretaries, when I myself was adopted into the family of Shaw's young men, when Crane and Sedding, Symonds and John Brett ruled in Barnard's Inn. We fought the good fight of 'Architecture a Profession or an Art' in the early 'nineties; and when, ten years later, we returned to the fold of the Institute, Newton and I worked side by side in architectural education and other enterprises, as we hoped, in the interests of architecture in what now seems long ago. In the anxious days of the war Newton presided over the Institute with untiring devotion, and his work for the Government under most difficult conditions is well known to all architects; indeed, it probably overtaxed his strength, and may have contributed to his untimely death. At the Academy he was held in the highest regard by his colleagues, for his tact, his ready sympathy, and sound common sense; and the loss of this valued member will be severely felt by that body.

As an architect his work is well known to all of us. His domestic architecture was of an excellent quality, refined by the fastidious taste and critical sense which he possessed in a very high degree, admirably adapted to its purpose and characteristically English. Architecture is poorer by the death of Ernest Newton. *Fato sibi immaturo, suis acerbissimo ereptus*. By his friends he will always be held in affectionate remembrance as one who was "unto them that sought him sweet as summer."

REGINALD BLOMFIELD.

Presentation to Professor W. R. Lethaby

There was a large attendance, at the rooms of the Art Workers' Guild on the afternoon of 18 January, of the friends and admirers of Professor Lethaby, who met together to celebrate his sixty-fifth birthday and to present him with an address, and Mrs. Lethaby with a portrait of her husband by Professor W. Rothenstein. Lord Crawford presided, and among those present were the Dean of Westminster, Mr. Paul Waterhouse (President R.I.B.A.), Mr. Ernest Newton, R.A., Dr. J. W. Mackail, Mr. Edward Warren, Professor Beresford Pite, Professor W. Rothenstein, Mr. S. C. Cockerell (Curator of the Fitzwilliam Museum), Mr. Arthur Keen, Mr. F. E. Burridge (Director of Central School of Arts and Crafts), Mr. Emery Walker, Mr. R. S. Weir, and Dr. Garnett.

An address to Professor Lethaby was read by Dr. Mackail, as follows:—

TO WILLIAM RICHARD LETHABY.

The names signed below are those of friends whom you have made and kept during your life. Among us are colleagues and pupils to whom your work and your teaching have been an inspiration which they take pride in acknowledging; among us too are those who, while not themselves executants or professed students of the applied arts, are equally conscious of and equally grateful for the example you have set of a life devoted to high aims, for your services as an interpreter of the past, and for what you have done to awaken the love of noble beauty and to make the arts of which you have been the follower and exponent a power and a joy in human life. All of us alike desire to express our appreciation of your work, our regard for your character, our obligations to your writings and lectures, and our gratitude for the ideal which, by precept and example, you have constantly held up before us as students, as craftsmen, and as citizens.

For nearly half a century you have, as a scholar and craftsman, and as a teacher and expounder of the mistress-art of architecture and its ancillary art of design, exercised a quickening influence over the theory and practice of those who, as comrades and pupils, have accompanied or followed you on the same path. Our debt to you demands the recognition which we are desirous to give, and which we trust that you will be gratified to receive. As a student you were already an accomplished draughtsman, and gave the first proofs of that sense of style and faculty of design for which all your work has been conspicuous. As assistant to Norman Shaw you became attached to a great school; for Norman Shaw himself had succeeded Philip Webb and William Morris in George Edmund Street's office, and your name, as well as your aims and ideals, thus became linked with theirs. With both Webb and Morris the closeness of your association and the intimacy of your friendship remained unbroken as long as they lived. As a designer of buildings and of their accessories, and as one

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who taught and practised the right application of materials, you carried on the movement which these great artists initiated. But your main sphere has been in the fields of teaching and research, of organising and interpreting, and of the application of the arts to civic and social improvement. In the eighteen years during which you were Professor of Design at the Royal College of Art, hundreds of students passed through your hands. Some of them have attained eminence; all would acknowledge their debt to a teacher who combined enthusiasm with good sense, devotion to ideals with fine scholarship, and wide historical knowledge with high executive ability. As one of the founders and directors of the Central School of Arts and Crafts, as an original member and past master of the Art Workers' Guild, as one of the group who organised the exhibitions of the Arts and Crafts Exhibition Society, and in many other ways, you did valuable service both in training art workers and teachers, and in fostering a wider public appreciation of sound, sincere, and vital art. You are known and honoured as an interpreter of ancient Greece and of Byzantium, and, not less, as was fittingly recognised by your appointment as Surveyor of Works for Westminster Abbey in 1906, of that great mediæval art which is one of the chief glories of our own country. For to you art has always been a single continuous expression of the highest human thought; and your energies have been devoted, not only to preservation and appreciation of the work of past ages, but to bringing art into living contact with the life of the present day.

To these words of grateful record we desire to add our best wishes for the years which may still lie before you; and we ask you to accept our assurance that your influence lives and that your work has not been in vain.

In addition to the presentation of the address the organising committee have arranged for the publication of such of Professor Lethaby's writings as, owing to present cost, might not otherwise be permanently recorded. We understand that the first book, entitled "Form in Civilisation," is to be published at once.

In acknowledging the address Professor Lethaby said:—

I must speak a word of the masters who have been prophets to me. The first was Ruskin, whom I quite early found for myself, full fifty years ago. The next was Norman Shaw, whose office I entered at the age of twenty-two. He was not only highly gifted, but he was a delightful man. To work with him was all pride and pleasure. In the dozen years of such work and play I never saw him irritated; he was amazingly generous and loved to praise us whenever he could. Here, too, I found the group of my first London friends—Horsley, Macartney, Newton, Prior, FitzRoy, Weir, Swainson and Barnsley. Barnsley had contact with Sedding's office, and thus I early met Ernest Gimson, who introduced me to the Society for the Protection of Ancient Buildings, through which I was to meet my other two masters, Morris and Webb.

In a way, I love most art, from Egyptian to Japanese, but there are a few things which suggest to me some more inward harmony and contentment than the rest. These include Phidian sculpture, mediæval buildings, Turner pictures, and Morris patterns. It may seem absurd to men-

tion mere chintzes and wallpapers with world masterpieces, but the Morris designs to my mind are not mere delights—they are depths. Of myself, I see that in a way I was born to read Ruskin and look at Morris; I heard him gladly, too, and often still, when some seemingly original gleam comes to me, my second thought is: Why, that is what Morris must have seen or meant!

The happy chance of close intimacy with Philip Webb, the architect, at last satisfied my mind about that mysterious thing we call architecture. From him I learnt that what I was going to mean by architecture was not mere forms and grandeurs, but buildings honest and human, with hearts in them.

Now I must speak of a few other of my earliest friends. Of these I think first of Sidney Cockerell, who had an inside place in the Ruskin-Morris circle; then of Alfred Powell, Emery Walker and Thomas Rooke. Beresford Pite I met at a different angle in the R.A. schools. Then came the days of the Art Workers' Guild and the Arts and Crafts Society, which gave me many more dear friends: John Sedding, Halsey Ricardo, Christopher Whall, Haywood Sumner, and Cobden Sanderson. I must cease here with recalling my very earliest friends: later the crowded days of the London County Council Central School and South Kensington opened out new orbits and new stars in the firmament to light me on my way—officials, masters, students past counting became valued friends. Through you I thank them all.

I must just mention the little book which is to be published as a sort of memorial of this occasion. I have had the papers by me for years, but without the help from without I see they would never have been published. At the same time it is understood that you are in no way responsible for any of the opinions expressed, which in many cases are narrowly personal and probably irritating. If I had foreseen all, I should have drawn out of this part of your suggestions or have substituted something more colourless. I see that they are a crude attempt to set down what I seem to have found out about life. The result is something like this—

- (1) Life is best thought of as Service;
- (2) Service is first of all and of greatest necessity productive work
- (3) The best way to think of labour is as art. This was Ruskin's and Morris's great invention. By welcoming it and thinking of it as art the slavery of labour may be turned into joy.
- (4) Art is best thought of as fine and sound ordinary work. So understood it is the widest, best, and most necessary form of culture.
- (5) Culture should be thought of not as books and pleasantmanners, but as a tempered human spirit. A shepherd, ship-skipper, or carpenter enjoys a different culture from that of the book-scholar, but it is none the less true.

Obituary

MR. W. S. WEATHERLEY [F.].

The death of William Samuel Weatherley, F.R.I.B.A., on 3 January, in his 71st year, removes an architect not, perhaps, very widely known to the general public, but who, during a long working life, carried out a very considerable amount of work, always maintained at a high level of excellence and marked with a very definite touch of the artist.

His works were principally carried out for private clients, but among others may be mentioned the rebuilding of Hatchett's Hotel in Piccadilly; new premises in Maddox Street and a house at Witly, Hants, for Edward Arnold the publisher; additions and alterations to Carbisdale Castle, N.B., for the Duchess of Sutherland; various works for Sir Alexander Macdonald of the Isles; additions to houses at Windsor for Mr. Arthur Leveson-Gower; and extensive additions to the Yorkshire Society's School in Westminster Bridge Road. He was also responsible for important church restoration work at Boston, Lincs, East Leake, Brandesburton, Stanford-on-Soar, etc., and new churches at Oxford and Norbury.

He also had the responsible task of preparing all the working drawings for the great Roman Catholic church which Mr. G. G. Scott, junr., designed for the late Duke of Norfolk at Norwich.

An introduction to Count Bentinck in 1880 was the beginning of a successful practice in Holland, where, amongst other works, he carried out extensive alterations and additions for Count Bentinck. Mr. Weatherley, in conjunction with William Brindley, published (1887) the well-known book on Ancient Sepulchral Monuments.

MR. W. T. OLDRIEVE [F.].

The death has occurred in Edinburgh of Mr. William Thomas Oldrieve, who from 1904 to 1914 was H.M.'s principal architect in Scotland. Mr. Oldrieve's term was specially noteworthy for his interest in historical buildings, many of which he overhauled and restored. In Edinburgh Castle he discovered ancient subterranean buildings of great interest. Stirling Castle also was restored under his direction, and he carried out excavations to expose the foundations of Holyrood Abbey, besides taking measures for the preservation of the ruins. He was a member of the Royal Commission on the Ancient Monuments of Scotland.

JAMES HENRY LA TROBE [F.].

Mr. La Trobe was born at Bristol in 1862, and educated at Königsfeld, in the Black Forest. He commenced practice as an architect in 1884, acting as joint architect with Mr. T. H. Weston, who became partner in 1895. Mr. La Trobe carried out numerous business, institutional, and domestic buildings in Bristol and the neighbourhood, including the Bristol School of Industrial Art, Broad Weir; Wesleyan chapels at Easton (near Weymouth), Lynton, Stoke-under-Ham, Knowle, and Horfield; the Tuffley housing scheme, Gloucester; Messrs. Purser's premises, 35 to 41 Castle Street; and other buildings.

TRIBILCO (ARTHUR FLOYD), *Associate* (elected 1911).

Competitions

AUCKLAND AND NEW ZEALAND WAR MEMORIAL COMPETITION.

The following cablegram has been received by the Secretary of the R.I.B.A. from the Mayor of Auckland:

"Auckland Competition. Read following with answers questions due London end month. Question asked discloses hall required Foreign Zoology omitted from conditions. This hall one hundred and thirty feet by sixty feet to be placed in schedule answers to questions question seven in first floor accommodation. Place similarly central hall and vestibule. Advise Society Architects and architectural press. Promoters much regret error.—GUNSON Mayor."

SEAFORD LAY-OUT COMPETITION AND WHITTLESEY WAR MEMORIAL COMPETITION.

The Council have ordered the following Resolution to be published in the JOURNAL of the Royal Institute:

"Members and Licentiates of the Royal Institute of British Architects must not take part in the above competitions because the conditions are not in accordance with the published Regulations of the Royal Institute for Architectural Competitions."

TRUJILLO STATUE OF "LIBERTY," PERU.

The conditions of the above competition are not in accordance with the International Regulations, and are being considered by the Competitions Committee.

IN NEGOTIATION.

The Competitions Committee are in negotiation with the promoters of the Kirkwall War Memorial.

COMPETITIONS OPEN.

Auckland War Memorial.
Kirkcaldy War Memorial.
Dundee War Memorial.

The conditions and other documents relating to the above competitions may be consulted in the Library.

WEDDING GIFT TO H.R.H. THE PRINCESS MARY.

Sir John Baddeley, the Lord Mayor of the City of London, writes to say that he is raising a fund for presenting a wedding gift to Princess Mary from the citizens of London, and requests that intimation be given to members of the Institute who are connected with the City. The donations are not to exceed £1. The fund will remain open for three or four weeks. The intention is to make the gift a personal and not a formal offering to the Princess from each donor, as a mark of the affection in which she is held.

R.I.B.A. Prizes and Studentships, 1922 : Deed of Award.

The designs and drawings submitted for the prizes and Studentships in the gift of the Royal Institute are now on exhibition in the R.I.B.A. Galleries, 9 Conduit Street, and will remain open to members and the public until 6 February (10 a.m. till 8 p.m.; Saturdays, 5 p.m.). The Council's Deed of Award, read at the General Meeting of 23 January, gives the results as follows :—

THE ROYAL INSTITUTE SILVER MEDAL.

The Essay Medal and Twenty-five Guineas.

Six essays were received for the Silver Medal under the following mottoes :—

1. "Androcles" : Architecture, the Man in the Street, and Architects.
2. "Black Cat" : The Vault.
3. "Concrete" : The Influence of Materials and Forms of Construction upon Architectural Design, with particular reference to Reinforced Concrete.
4. "La Loi" : Logic in Architecture.
5. "Panic Fear" : The Imaginary Architecture of Literature.
6. "Serva me Servabo Te" : The Spirit of the Renaissance in Architecture and its Bearing on Modern Design.

The Council regret that they are unable to award the Silver Medal, and have awarded a Certificate of Hon. Mention to the author of the essay on "The Imaginary Architecture of Literature," submitted under the motto "Panic Fear."^{*}

THE TRAVELLING STUDENTSHIPS.

(i.) *The Soane Medallion and One Hundred and Fifty Pounds.*

Three designs for a Central Group of Buildings for a modern non-residential University were submitted under the following mottoes :—

1. "B Minor" : 8 strainers.
2. "Per Angusta" : 8 strainers.
3. "Gold Diamond" (device) : 7 strainers.

The Council have awarded the Medallion and, subject to the specified conditions, the sum of one hundred and fifty pounds to the author of the design submitted under the motto "Per Angusta,"† and a Certificate of Hon. Mention to the author of the design submitted under the motto "B Minor."‡

* "Panic Fear," Herbert J. Harding, A.R.C.A., 2 New Square, Lincoln's Inn, W.C.

† "Per Angusta," Alfred John Brown, 35 Handside Lane, Welwyn Garden City, Herts.

‡ "B Minor," Thomas E. Scott, A.R.I.B.A., Northern Polytechnic Institute, Holloway, N.

(ii.) *The Owen Jones Studentship and One Hundred Pounds.*

Two applications were received from the following gentlemen :—

1. W. J. Knight [A.] : 3 strainers and 3 framed drawings.
2. B. W. Ridley [A.] : 4 strainers.

The Council have awarded the Certificate and, subject to the specified conditions, the sum of one hundred pounds to Mr. W. J. Knight, of the Royal College of Art, South Kensington, S.W.

(iii.) *The Henry Saxon Snell Prize of Fifty Pounds.*

Two designs for an Asylum for 200 Aged and Infirm Poor were submitted under the following mottoes :—

1. "Grenade" (device) : 6 strainers.
2. "Staff" : 5 boards.

The Council regret that they are unable to award the Prize, and have awarded a Certificate of Hon. Mention and £5 to the author of the design submitted under the device of a Grenade.§

(iv.) *The Pugin Travelling Studentship and Seventy-five Pounds.*

No drawings were submitted in competition for the Pugin Studentship.

The Grissell Gold Medal and Fifty Pounds.

Four designs for a Mooring Mast for an Airship in connection with an hotel accommodating 50 passengers were submitted under the following mottoes :—

1. "Cavan" : 5 sheets.
2. "Job" : 3 sheets.
3. "Nike Apteros" : 3 strainers.
4. "Spero" : 2 sheets.

The Council regret that they are unable to award the Prize.

The Arthur Cates Prize of Thirty Pounds.

No drawings were submitted in competition for the Arthur Cates Prize.

The Ashpitel Prize, 1921.

The Council have, on the recommendation of the Board of Architectural Education, awarded the Ashpitel Prize (which is a Prize of Books, value £10, awarded to the candidate who has most highly distinguished himself among the candidates in the Final Examinations of the year) to Mr. Lawrence William Ingham [A.], of 1 Strathmore, Sutton, Co. Dublin; Probationer 1905, Student 1907, and who passed the Final Examination July 1921.

§ Lieut. K. H. Read, A.R.I.B.A., O.C. School of Building Education Training Centre, Thornhill, Aldershot.

The Examinations

THE FINAL: ALTERNATIVE PROBLEMS IN DESIGN.

Instructions to Candidates.

1. The drawings, which should preferably be on uniform sheets of paper of not less than Imperial size, must be sent to the Secretary of the Board of Architectural Education, Royal Institute of British Architects, 9 Conduit Street, W., on or before the dates specified below.

2. Each set of drawings must be signed by the author, AND HIS FULL NAME AND ADDRESS, and the name of the school, if any, in which the drawings have been prepared must be attached thereto.

3. All designs, whether done in school or not, must be accompanied by a declaration from the Student that the design is his own work, and that the drawings have been wholly executed by him. In the preparation of the design the Student may profit by advice.

4. Drawings for subjects (a) are to have the shadows projected at an angle of 45° in line, monochrome, or colour. Drawings in subjects (b) are to be finished as working drawings. Lettering on all drawings must be of a clear, scholarly, and unaffected character.

Subject LXI.

(a) A MOTOR GARAGE.—The building is to be erected on a level corner site in a large town. Dimensions of site: 200 feet by 100 feet. The Garage to be on three floors—basement, ground, and first. The main access from the street for the automobiles to the basement and first floors to be by means of sloping ways, of a maximum incline of 1 in 10.

The ground floor to be level with the street. The object of this programme is to provide a maximum floor area with as few constructional supports as possible.

In addition to the actual space required for the storing of motor cars, a covered space on the ground floor to be provided for cleaning 4 large cars simultaneously.

- A repair shop for 4 cars.
- A lift for damaged cars.
- Two offices with lavatories, etc.
- A show room for accessories.

Drawings.—Plans of 2 floors: at $\frac{1}{4}$ -inch scale.

Elevation and section showing construction at $\frac{1}{4}$ -inch scale.

Detail with section through one of the outside walls showing construction at $\frac{1}{4}$ -inch scale.

(b) A BUILDING FOR AN ARCHITECTURAL SOCIETY.—Will be situated in a main street, and have a frontage of 80 feet. Accommodation required:—

Ground floor: Entrance hall, secretary and administrative offices, council room, committee room.

First floor: Meeting room (for lectures and exhibitions), with ante-room, President's room, and writing room.

Second floor: Small reference library, with store-room, librarian's room, committee room.

Lavatory and cloakroom accommodation to be provided in basement and on second floor.

Kitchen, etc., and caretaker's quarters—with separate stairs—to be provided either in basement or attic. Heating apparatus to be in basement.

Drawings.— $\frac{1}{4}$ -inch scale plans, sections, and elevation. $\frac{1}{4}$ -inch detail of entrance, showing interior and exterior details.

Subject LXII.

(a) A new opening in a deer park wall (stone 8 feet high) is to be made for CARRIAGE GATES—provide LODGES for the ranger of the park, and for the married gatekeeper.

Drawings.— $\frac{1}{4}$ -inch scale plans, elevation, and section, and $\frac{1}{4}$ -inch scale detail of gate and piers and one lodge.

(b) A level island site in a country town, on which is to be built A ROW OF SMALL HOUSES for gentlepeople of small means. The block to consist of 6 or 7 houses, each house having an average frontage of 24 feet. The accommodation of the houses may vary from 2 to 3 sitting rooms, from 4 to 6 bedrooms, and 1 or 2 bathrooms. The kitchen offices may not be placed in a basement.

Drawings.—Complete ground plan; bedroom floor plans (these need not be duplicated); 3 elevations, 1 section, all to $\frac{1}{4}$ -inch scale; block plan showing lay-out of gardens—the front garden is to be common to all the houses, without any fencing or gates, to $\frac{1}{4}$ -inch scale; $\frac{1}{4}$ -inch scale section and part of an elevation.

Subject LXIII.

(a) A CRICKET PAVILION for a county ground, with accommodation for, say, 300 spectators, lavatories, etc.; lavatory and changing room for amateurs and professionals, scoring box, luncheon room, small kitchen and staff room, committee room, etc.

Drawings.— $\frac{1}{4}$ -inch scale plans, 2 elevations and sections, $\frac{1}{4}$ -inch details.

(b) A SPORTS CLUB.—This club, which would be situated in a large garden, would be designed to accommodate wealthy members interested in sport.

It would be situated on two floors, and the accommodation required would be as follows:—

Ground floor and semi-basement.—Entrance hall, porter's lodge, vestibule, staircases, cloakrooms and lavatories, swimming bath for displays and competitions, with dressing rooms, linen room, and attendants' room (the swimming bath to be 100 feet by 35 feet and 8 feet 6 inches in the deep end), a large gymnasium, 3 squash racquet courts, 6 small private dressing rooms (each containing bath and wash basin), staff and goods entrances, service staircases, etc.

First floor.—Large hall (for boxing displays and theatrical performances), green room and dressing room, small restaurant with kitchen and services, separate cloakrooms and lavatories for ladies and gentlemen, billiard room; caretaker and attendants to be lodged in an attic storey.

The area in the park reserved for this building not to exceed 200 feet by 120 feet.

Drawings.—Plan of ground floor, plan of first floor, principal elevation, section— $\frac{1}{4}$ -inch per foot.

Dates for submission of Designs in 1922.

	Subj. LXI.	Subj. LXII.	Subj. LXIII.
United Kingdom	28 Feb.	29 April	30 June
Johannesburg	29 April	30 June	31 Aug.
Melbourne	31 May	31 July	30 Sept.
Sydney	31 May	31 July	30 Sept.
Toronto	31 Mar.	31 May	31 July

Special General Meeting

UNIFICATION AND REGISTRATION

The Council have received a written requisition, signed by the required number of members, asking that a Special General Meeting be called, under By-Law 65, to discuss the following motion:

"That this meeting is of opinion that the conditions for the Unification of the profession should form part of a Registration Bill, and that the present system of admittance to the Institute, including compulsory examination, should continue in force until a Registration Bill be passed."

Notice is accordingly given that a Special General Meeting will be held at 9 Conduit Street, W.1, on Tuesday, 7th February, at 5.30 p.m., when the above-mentioned motion will be submitted.

IAN MACALISTER,
Secretary R.I.B.A.

Members' Column

Members, Licentiates, and Students may insert announcements and make known their requirements in this column without charge. Communications must be addressed to the Editor, and be accompanied by the full name and address. Where anonymity is desired, box numbers will be given and answers forwarded.

OFFICE TO LET.

To LET, exceptionally light, large room, about 24 ft. by 30 ft., at 124 Victoria Street, S.W.1. Fitted with linoleum, gas fires, and electric light fittings. Top light. Suitable for studio or drawing office. Rent £96.—Apply Housekeeper.

[PARTNERSHIP WANTED.

EX-ENGINEER OFFICER, age 33, Civil Engineer and Architect, is desirous of entering into partnership with architect in provincial practice.—Box 1712, c/o Secretary R.I.B.A., 9 Conduit Street, London, W.1.

CHANGE OF ADDRESS.

MESSRS. FETTERSTONHAUGH AND McDUGALL have changed their address from 311 St. Catherine Street, West, to 85 Osborne Street, Montreal.

APPOINTMENTS WANTED.

SENIOR ASSISTANT, at present disengaged, desires post. Good all-round experience in best London offices.—Box 714, c/o Secretary R.I.B.A., 9 Conduit Street, W.1.

EX-CAPTAIN, A.R.I.B.A., 34, married and two children, with 12 years' London experience, including own practice, now stranded. Expert designer and draughtsman. Public School and A.A. man; been in first-class offices only—last two jobs 2½ and 2 years respectively. Travelled nearly all over Europe and parts of Asia and Africa. Willing to tackle any job, architectural or otherwise. Last salary £450 p.a., but will take less if permanent.—Apply Box 1472, c/o Secretary R.I.B.A., 9 Conduit Street, W.1.

MR. JASPER SALWEY, A.R.I.B.A., author of *The Art of Drawing in Lead Pencil* (Batsford), is prepared to put his varied knowledge and wide experience as a draughtsman at the disposal of architects in or near London in return for reasonable remuneration.—All communications, c/o Secretary R.I.B.A., 9 Conduit Street, W.1.

A.R.I.B.A. desires appointment; is prepared to acquire an interest in established firm after probationary period. Eighteen years' varied experience. Ex-R.A. Schools student. Would join architect in competition or speculative work on mutual terms.—Address Box 1421, c/o Secretary R.I.B.A., 9 Conduit Street, London, W.1.

A.R.I.B.A. (35), ex-officer, disengaged owing to reduction of staff, has recently held a responsible appointment under a County Council. All-round experience. Highest credentials.—Address Box 144, c/o Secretary R.I.B.A., 9 Conduit Street, W.1.

A.R.I.B.A., aged 31, ex-officer, desires appointment. Trained in a Glasgow architect's office for five years, and at Glasgow School of Architecture. Good experience in all classes of work, including town planning, civic and landscape design.—Apply Box 2112, c/o Secretary R.I.B.A., 9 Conduit Street, W.1.

STUDENT R.I.B.A. 1913; 21 years' actual experience as assistant, City business premises, town and country houses, factory buildings, and has assisted on ecclesiastical work. Good design, working drawings, &c., 2 years chief assistant, used to taking charge during absence of principal. Member R.A. Ateliers.—Box 341, c/o Secretary R.I.B.A.

PROMOTIONER, R.I.B.A., 4 years' war service, 2 years London University School of Architecture, 1 year's office experience, desires post in an office; requires advice for testimonies of study for special War Examination, July 1922. Nominal salary. London preferred.—Address Box 248, c/o Secretary R.I.B.A., 9 Conduit Street, W.1.

Minutes VIII

At the Sixth General Meeting (Ordinary) of the Session 1921-1922, held on Monday, 23 January 1922, at 8 p.m.—Mr. Paul Waterhouse, President, in the chair. The attendance book was signed by 38 Fellows (including 10 members of the Council), 60 Associates (including 3 members of the Council), 3 Licentiates, and numerous visitors. The Minutes of the meeting held on 9 January 1922, having been taken as read, were agreed as correct.

The Hon. Secretary announced the decease of:—Oldrieve, William Thomas, H.R.S.A., F.S.A. (Scot.), elected *Fellow* 1906, President of the Edinburgh Architectural Association, and a member of the Council of the Royal Institute; Weatherley, William Samuel, elected *Associate* 1880, *Fellow* 1886; Trebilco, Arthur Floyd, elected *Associate* 1911. And it was Resolved that the regrets of the Royal Institute for their loss be entered on the Minutes, and that a message of sympathy and condolence be conveyed to the relatives of these three deceased members.

Messrs. C. A. Daubney, *Fellow*, and R. A. Cooksey, G. T. Harman, N. D. Quick, J. B. Symonds and F. Woods, *Associates*, attending for the first time since their election, were formally admitted by the President.

Professor William Rothenstein, M.A., Principal of the Royal College of Art, having delivered an address entitled "Architectural Draughtsmanship," a discussion ensued, and on the motion of Sir Reginald Blomfield [F.], R.A., whose speech, in his unavoidable absence, was read by the Hon. Secretary, seconded by Mr. H. Chalton Bradshaw [J.], a vote of thanks was passed to Professor Rothenstein by acclamation, and was briefly responded to.

The Secretary having read the Deed of Award of Prizes and Studentships made by the Council under the Common Seal, the sealed envelopes bearing the mottoes of the successful competitors were opened and the names disclosed. The proceedings closed at 9.45 p.m.

R.I.B.A. JOURNAL.

Dates of Publication.—1921: 12th, 26th November; 10th, 24th December. 1922: 14th, 28th January; 11th, 25th February; 11th, 25th March; 8th, 22nd April; 6th, 20th May; 3rd, 17th June; 15th July; 19th August; 23rd September; 21st October.



Address to Students

By THE PRESIDENT, Mr. PAUL WATERHOUSE, M.A.

Delivered at the General Meeting of the Royal Institute of British Architects, Monday, 6 February 1922

THERE are three unfailing ingredients in an address to students: a congratulation to the students on living in their present generation and under their present advantages, an assurance that it is as satisfactory to lose a prize as to win one, and finally a desperate assertion on the part of the speaker that he, like his hearers, is a student. If I keep alive these three traditional essentials to-night it is not because I am quite sure that I believe in any of them, but because I should like to study them in something more than the conventional aspect. To begin with the last first, if I am a student it is clear that I am not one in the sense in which you are. There is a pleasure in acquiring knowledge, and, being fond of pleasure, I sometimes still acquire it; also there is a shame in being ignorant of certain things, and from time to time I, like other seniors, try to fill up some of the worst chasms of ignorance. In these senses a man of my age may be said to be a student. But the attitude of mind in my contemporaries and myself is entirely different from yours. Up to the age of 25, or perhaps 30, a man is engaged in a desperate struggle to quarry for himself a certain bulk of knowledge—if he falls below that bulk at the given age he goes into life short of something that he can rarely make up in after life. He is therefore in those days of his youth under a strain of acquisition to which his elders are not subjected. And if his pleasure in the learning habit continues in after life, it is probable, not that

he was behindhand when the hour of his supposed full equipment struck, but that he had by that time learnt enough to know how little he had already dug from the vast rock of available knowledge.

Again, owing to the limits of human vision, the young man's outlook on the world of capturable knowledge is entirely different from that of the older man. You are reasonably certain that with reasonable application you can in the allotted time be master of the allotted facts—and for all you know the allotted facts are enough to make you the perfect man—or better still, the perfect architect. For us (the men of my age) the view is different. The horizon of unacquired knowledge is further off, the unworked quarry is deeper, and the task of gaining any completeness of knowledge is more obviously hopeless. Does that sadden us? Far from it. I think our case is the happier of the two. In the first place it is acknowledged that there is no obligation upon any man over forty ever to learn anything, and many of us enjoy this liberty to the full. Secondly, to those of us who do care to go on with the learning process, the boundlessness of unattained knowledge is not a trouble, but a pleasure. For what does it mean? It means this, surely, that the hilltop being unreachable we don't try to reach it; we are free to pick and choose among the thousand paths that encircle the mountain, or, more happily, to plunge into some of those thick coverts where as yet but few have trodden.

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To put it plainly, what is a business to you is a sport to us. After all, the happiest people are those who make a sport of their business, and a business of their sport; so it is difficult to say whether you or we are the happier. But you can take it from me that if a man's life is devoted to architecture, and if he is able to discover in it both his life's work and some of his life's sport, he will not find his life's *troubles* in his architecture. Do I mean that an architect's sport should be in architecture to the exclusion of physical sport? Not I!

People do not always realise the necessity for mind sport. The intellectual classes—I mean the people who earn their bread mainly by the sweat of the *brain*—have a way of thinking that mental exercise is work and bodily exercise play. I don't wish to linger over this disastrous error longer than to explain that there is such a thing as brain sport and that it can be had in a great many other forms than novel reading, the drama and cards—all of which are most excellent.

So far have I been led—perhaps led astray—by discussing the theory that both you and I are students. What of the suggestion that you are to be congratulated on the postponement of your birth till the present generation of knowledge? This is an interesting problem and a pretty difficult one. We know that the world of to-day knows a great deal more than the world of thirty years ago. We also know that the tests of knowledge applied to young men now, in the way of examinations and competitions, are stiffer than the tests applied to your fathers. What can we deduce from this? The obvious and most simple deduction is that the educational burden on your generation is much heavier than that laid on mine. If we leave it at that I can hardly offer you my congratulations with anything like sincerity. But is the deduction a fair one? I don't suppose it is. Some will say that every generation is more capable of acquiring knowledge than the previous one, and that this is a symptom of the general march of civilisation from the savage to the man of supreme wisdom. I do not think this is historically true. Far be it from me to suggest that your generation is not an abler one than mine. I expect it is. But there were men in the thirteenth century, the first century A.D. and the fourth and fifth B.C. with whom we dare not for a moment compare ourselves. The fact is, I expect that the ever-increasing burden of the bulk of available knowledge is counterbalanced by three things. One

is that as knowledge grows the means of acquiring it quickly also grow; another that a tendency to greater specialisation lessens the individual load of the learner; and the last is this: that, after all, the race a young man runs is not a race against the general progress of universal knowledge but a race against his contemporaries, who, being like himself receptacles of limited capacity, cannot any of them contain the uncontainable.

So it stands thus, I think—a man's chances of success by supremacy are equal in all ages; but inasmuch as it is well to have all the knowledge possible and especially so in our own most delightful craft, I fall in with my predecessors and say, Happy are you in that you were born on a higher contour line than us, and happy are we who are still in sight of your beginnings of achievement on the higher slopes.

Just a word about the subject touched above: the easing of the individual burden by specialisation. An architect must at least in his training be an all round man. There is a real danger lest the magnitude of his task be relieved either by neglecting one side of architecture for another or by neglecting general education. Without general education an architect can neither face the problems of his craft nor the personalities of his clients or of his contractors. Gloomy as is the spectacle of an architect who neglects construction for pictorial effect, or who starves his art because he develops his knowledge of material, there is a more woeful sight still—that architect who in everything but design is a man of general ignorance.

And so I come to the last point—the consolation which the reader of an address to students offers to the unsuccessful. It cannot honestly be said even by the elder who most conscientiously forgets his own youth, that failure to win is anything but bitter. Gentlemen, to you who have toiled hard and been beaten, I offer not the mockery of the suggestion that honest defeat is a pleasure in itself, but downright common sympathy. I have been in your plight many a time and I know that it hurts. The best consolation is that which comes easily to every Briton because we are a race of sportsmen.

It is a comfort to us to know that we beat the world for contentment in defeat and that without defeat there would be no victories.

The use of the word student in our country is an interesting one. Gentlemen of the Press often misuse the word and apply it to schoolboys and college men of all kinds. They are quite correct from the

mere dictionary point of view, but they defy the common usage.

It happens that in practice we almost entirely confine the word to men who after general schooling have set themselves to the acquisition of some pursuit of their own choice. In other words, the

student is a volunteer, not like the schoolboy, a conscript in the army of learning.

That is rather a happy thought, I think, and it leads me to point out, in conclusion, that no one should ever be an architect except of his own free will. Fortunately, very few are.

Votes of Thanks to the President

Rev. E. C. PEARCE, D.D. (Vice-Chancellor of the University of Cambridge): Mr. President, I rise to attempt, however inadequately, to repay to you, Sir, the debt of gratitude which we all feel for the wise, eloquent and witty address which you have just given to us. I, personally, sympathise very much with you, Sir, because one of the frequent tasks which is laid upon a Vice-Chancellor is giving away prizes.

I come, at the invitation of the Institute, with the greatest possible gladness; I come to pay a debt not only to your President for his most interesting address, but also to this Institute for what they have done for Cambridge. You may know that we have a lusty bantling at Cambridge University, the School of Architecture. I do not quite know whose child it is; it has many putative fathers; but I should say that Professor Beresford Pite probably had something to do with bringing it to birth. We are trying to do what we can to give education in architecture, which I hope is not vocational. I am out against vocational education. I remember that, during the war, I was called upon to attend a Conference of Colonial and Home Universities, and in the course of the proceedings it fell to my lot to defend Home Universities against the attack which was being made upon them by our Colonial brethren. I need not say what the attack was, but the burden of my remarks was chiefly this: that Cambridge—and I suppose I can speak for Oxford too—is not a place where you go to lectures, and it is not a place where you profess to learn anything, least of all how to dodge examiners; but Cambridge is a place where you live for three years. And that, bluntly put, means that education there is not vocational, that the great education you derive is how to deal with your fellow man. I imagine

that for an architectural school it is of the utmost importance not only to be able to build buildings, but to know how to deal with clients who order them. That is one of the things we are trying to teach.

But I am not here to explain what Cambridge is doing; I am here to thank you for your excellent address. I beg to propose a hearty vote of thanks to the President.

Mr. WARREN: A dreadful message was brought to me, most politely, ten minutes ago, by Mr. MacAlister, that I was requested to fill the shoes, for the moment, of a much more competent and distinguished gentleman who, unluckily for you and still more unluckily for myself, is unable to be present. However, I am, nevertheless, very glad I am present, because it is always a pleasure to listen to our President, and on this occasion it has been, perhaps, a greater pleasure even than usual, which is saying a very great deal. The dish which he presents to us is always so beautifully seasoned with his charming humour. I do not know what has led me to drift into this kind of culinary metaphor, but having drifted in, I suppose I must pursue it and say that my admiration of the feast he has given us is intense. I do not know indeed whether I more appreciated the *hors d'œuvre* of his preliminary remarks, or the *pièce de résistance* of the admirable address itself; but I am left with a sense of comfortable oratorical repletion after the meal, and am delighted to second the vote of thanks which has been so charmingly proposed by the Vice-Chancellor of the University of Cambridge.

The President, having briefly replied, called upon Mr. Theodore Fyfe to read his criticism on the students' drawings.



Review of the Work Submitted for the Prizes and Studentships, 1921-22

By THEODORE FYFE [F.]

Read before the Royal Institute of British Architects, Monday, 6 February 1922

MR. PRESIDENT, LADIES AND GENTLEMEN,—When I accepted the honour of the President's invitation to address the students on their work to-night, my first thought was how jolly and stimulating it would be to do this; stimulating because the study of fine collective effort towards an ideal is always stimulating.

The sight of a great exhibition of pictures has the effect of re-creating the eye, and through the eye the whole being, so that even common things and quite ordinary persons are not what they seemed before, but have a new and fresh expression. In a similar way our Students' drawings can have that recreative value. In their happy pursuit of the ideal in design and their delightful rendering of fact in draughtsmanship, they can give us that stimulus which we all need at times. Whatever I may say in the way of criticism to-night, I do want the students to realise—speaking on my own behalf and on that of the Institute as a whole—how much we value these annual exhibitions of theirs.

In commenting on THE ESSAY PRIZE for this year, I want principally to draw prospective candidates' attention to the conditions which state that "the competitors will be expected to make a useful contribution to knowledge by accurate research, so that the essays can be accepted as authoritative statements on the subjects dealt with." This important suggestion has been largely ignored in the present instance, and I would throw out a note of warning to students against choosing subjects which are matters of opinion and not matters of fact. The six essays submitted this year are as follows:—

"Architecture, the Man in the Street, and Architects."

"The Spirit of the Renaissance in Architecture, and its Bearing on Modern Design."

"The Influence of Materials and Forms of Construction upon Architectural Design, with particular reference to Reinforced Concrete."

"The Vault."

"Logic in Architecture."

"The Imaginary Architecture of Literature."

A bibliography is a useful addition to any essay, but it only indicates the direction of the candidate's thought and does not indicate, as references do, the value of his thinking. Two of the essays have no footnote references whatever, two more have only seven such references, and a fifth, out of thirty-eight references, has

only two which are to architectural works; so you will see that the spirit of research is not quite so profound as it might be. I emphasize these points as the Essay Prize in the past has given some very fine studies of real value to the Institute. One thinks at random of Mr. Percy Scott Worthington on "Five Famous Domes," and Mr. Corlette on "Colour in Architecture," essays which it is a delight and often a great help to consult. It was the intention of the Committee which went into the whole matter of the Essay Prize some years ago to try and secure subjects which are waiting for good treatment, and there are many such:—the facts of any of our traditional English building forms in a particular district; the treatment of features and accessories such as spires, lead-work, cast iron-work, wrought iron-work, grates, floor-tiles, etc., etc.,—things in which the writer can not only benefit others, but learn a great deal for himself by actual drawing and handling. Apart from their subjects, the essays this year are generally meagre in quality. The judges thought fit to give no award, but have given a certificate of Honorable Mention to the best essay submitted, that on "The Imaginary Architecture of Literature," which is well-done in its way and contains a lot of interesting information.

THE PUGIN STUDENTSHIP has no entrants, and I fear this is significant that the study of mediæval work is on the wane. What is to be our comment on this? Personally, I cannot help feeling that though mediæval forms may not constitute a spoken word in building to-day, their study to the architect is as valuable as that of Greek to the educated man, and further that there is perhaps a misapprehension of the meaning of the term "mediæval" among students. If it is borne in mind that it includes everything, great or small, in this country, after Roman work, up to and including the reign of Elizabeth, it must include the basis of all our domestic work, and its study be not only advisable but absolutely necessary for our proper education as architects. Let the student ponder this, and spend his very next holiday in running round a given area to see what he can pick up for the Pugin. But let him consult first the A. A. Sketch Book and other similar works, to see what has been fully recorded already. To win the Pugin with a good set of drawings is a great honour, as some of the finest draughtsmen of our time have competed for this prize.

THE OWEN JONES STUDENTSHIP affords a very welcome exhibition of fine and effective draughtsmanship

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and colour. The holder, Mr. W. J. Knight, has shown six strainers which are full of most interesting work. The three strainers devoted to the gems at Ravenna—San Vitale, the tomb of Galla Placidia, and the Baptistery—are admirably chosen and admirably drawn. The study of a portion of the interior of the Panthéon at Paris is well-done, though the architectural setting is a trifle too like tapestry. The design subject is also very good, if a little monotonous in decoration, and one feels that the base of the building, decorated as a whole, should be free of breaks altogether.

An interesting set of drawings is shown on four strainers by Mr. Ridley, but perhaps both too much and too little has been attempted on the two strainers devoted to old work. An entrant for the prize selecting his studies entirely in England is of course handicapped, but one might suggest that the frescoes at Cromwell House, East Grinstead, hardly form a colour subject.

Three designs have been sent in for THE SOANE MEDALLION, but this rather unsatisfactory result may be due in part to the unmanageable nature of the scheme on paper. I think it would be a good thing if the Committee that sets the design subjects for prizes in each year would arrange for one of their members to work out the content of the subject on paper possibly in some cases reducing the scale of the general drawings to one-sixteenth inch instead of one-eighth inch to a foot; but in any case satisfying themselves that drawings of larger size than antiquarian are not required. The entrants for this year's prize for "A Central Group of Buildings for a non-residential University" are to be congratulated in tackling the subject under the conditions at all, and two of them have put their material most beautifully on the paper. It was perhaps impossible to expect that they could illustrate their designs fully.

The winning design by Mr. Alfred J. Brown has a well-conceived layout, and places the central group of buildings in a commanding position. Having gone so far, the designer might usefully have turned the central group round, so that the lecture-theatre faced the faculty square and the court of honour obtained its true value as an axial approach. It is apparent from the layout plan that there is a difference in scale between the central and other buildings, and it is to the credit of the designer that he felt this himself, as his perspective drawing is freely modified. It is possible that Mr. Brown may have had in his mind the Institute of Technology at Boston, and if so, I would advise him to study that building again, and then compare the relative scale of the main portion and the side portions of his central group. The dome over the central group springs directly from the cornice of the main internal order, which is hardly weighty enough to give a proper effect of support to the expansive archivolts of the four penetrations, and the springings of these do not rise sufficiently clear of the cornice. A

little additional height internally as well as externally would, I venture to think, have increased the dignity of the dome. The study of the interior treatment and decoration of a large dome is one of the most fascinating that an architect has to deal with, and one finds that the old Italians made perspective pen drawings of their domes and made models as well whenever they could. In default of a model it is a good thing to study the treatment in perspective under various aspects, as this is more than usually necessary as a corrective to geometrical drawings when dealing with the hemi-spherical form.

The design placed second, by Mr. Thomas E. Scott, which has been given a certificate of Honorable Mention has not secured such an attractive layout, and it is much to be regretted that this shows all the buildings in block wash, so that there is really no complete drawing which enables one to see the scale of all the relative parts of the scheme. On the other hand, the designer very commendably shows an elevation of one of his subsidiary blocks to eighth inch scale, and he has rightly maintained a harmony of treatment between this and his central group. The planning of the latter is more compact but not so harmonious as in the winning design. The dome in this case is rather too overpowering for its surroundings, though it is well worked out in itself. The perspective is nearly a fine drawing and all the work is carefully shown. Minor practical defects are insufficient lighting to the central hall, and the too flat pitch given to the seating of the galleries.

The third design submitted, under the device of a gold diamond, shews evidence of haste. There is some merit in the conception of the great hall, particularly as shewn in the section, but the order treatments generally are a little out of scale with the interior of the domical space. I should advise this student to stick at it and try again, as there is certainly some stuff in his design.

The moral of this year's Soane design to students must be that it is most inadvisable to design a large scheme without setting it out fully. The whole must be visualised and drawn out to a uniform small scale before any enlarging is attempted.

THE HENRY SAXON SNELL PRIZE has not been awarded. The subject set, "an asylum for 200 aged and infirm poor," offered scope for good treatment. Of the two designs submitted only one, that by Lieut. K. H. Read, could be considered as in the running, and it has been given a certificate of Honorable Mention. It certainly looks like an asylum or group of alms-houses, but the plan is somewhat disconnected and one feels that there might have been a covered way across the quadrangle to the staff dining-room. This subject offers an extreme example of the value of draughtsmanship, and if the lettering of Lieut. Read's drawings had been better they would have been quite effective, because of

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the gentleness of their treatment. The crudity of his competitor's drawings is unusually evident in comparison. But crudity is an easily mendable fault, and "Staff" should see to it that he secures other qualities in future, in addition to clean draughtsmanship, which he certainly has got.

For THE GRISSELL MEDAL there were four entrants, and the Committee regretfully found themselves unable to make an award. The thanks of the Institute are due to the Air Ministry for their co-operation in setting the subject—"A Mooring Mast for an Airship in connection with a Hotel." But owing to some misunderstanding, one essential condition of a proper air-mast—that there should be no buildings immediately round its base—was not a part of the conditions as set. Of the four designs, one by "Nike Apteros" got clear of this disability, but the ferro-concrete construction was both faulty and unnecessarily heavy. The design submitted by "Spero" was on sound lines, but the radiating walls of the hotel at the base were unsuitable as support. The two other designs submitted were of insufficient merit. It is, however, interesting to note that one of them was purely steel-construction engineering, and this leads one to think that possibly every alternate year the Committee might permit a competitor to collaborate with an engineer in the production of a design, as this might usefully promote mutual co-operation and good fellowship between the two professions.

I think it should be made clear that in this case the judges would have felt themselves bound to give an award for a properly designed and constructed mast with a suitably-arranged hotel at the base of it within the prescribed area; and it was just because these requirements were in no case fulfilled completely that no award was made.

This was not a year for either the Tite Prize or the Measured Drawings Medal, but even so one would gladly have seen a better display of designs and drawings. All of us must silently realise one great cause for a small exhibition, but if there be any other cause—some chance word or some passing fashion perhaps—which may have led intending competitors to turn the other way, I should like to say a word in conclusion as an older student to younger students.

The Institute prizes have a great and splendid tradition which no slighting on your part can diminish or annul. There is one short period in your life and one only when you can compete for them, and if you do so you are always the better for it, whether you win or lose. These Galleries have often housed great and memorable exhibitions of students' work, and I look confidently to the time when we shall have such vivid exhibitions again, and, if we play our part aright, to a time when the wayfaring man will come in his thousands to see them. You students, in the fulness of the measure of your capacity, can contribute to that "joy in widest

commonalty spread" of which Wordsworth spoke; and surely there never was a time when it was more necessary to show that art, in the fullest meaning of that word, is, as expressed by a modern thinker, one of the *great values* of life. Find time, then, in the course of your career, to enter for one or more of the Institute prizes, and thus do your part to sustain a fine collective tradition of beautiful things.

British Institute of Industrial Art

EXHIBITION OF PRESENT-DAY INDUSTRIAL ART.

In one of his unguarded and shrewd moments, Georges Chédanne, the well-known French architect, used to say to his pupils: "Messieurs, les arts appliqués sont dignes de votre attention soutenue; il y a là un champ d'étude fertile pour tout architecte sérieux que le bon goût dirige"; and his words—spoken at a time when French applied art showed great hesitancy and doubtful taste—are even more applicable now. It is therefore a matter of satisfaction that under the aegis of the Board of Trade an exhibition of contemporary industrial art should have been opened at the Victoria and Albert Museum.

Perhaps the most satisfactory exhibits are to be found in the sections dealing with furniture, printing and textiles. Besides very happy examples of whole rooms by Messrs. Heal & Son and Charles Spooner, F.R.I.B.A., and J. Hall-Thorpe, we would commend, in Room III, some excellent armchairs and a round table in English walnut designed by the late E. W. Gimson, and executed by P. Waals, a craftsman of great ability, who shows also a particularly handsome hanging cupboard in unpolished English oak of his own design. Prof. W. R. Lethaby has some fine rain-water heads, and there is a bronze knocker by Gilbert Bayes in the same room which should not be passed unnoticed. Most of the potteries and most of the blown or engraved glass are of the usual type, those by the Royal Lancastrian Ware and James Powell & Sons being the best. Room II is full of beautiful textiles. Nothing could be more winsome than the hand block-printed linen curtains of Miss Phyllis Baron and the curtains and scarves of Mrs. Mairret, with their harmonious and bold colour-schemes. Some especially fine examples of Batik work by Alice Pashley are also noticeable; but where British applied art seems unexcelled is to be found in Room V, devoted to printing and allied industries. The Florence Press (Chatto & Windus), the Cambridge University Press, the Morland Press, the Dolphin Press (Geo. W. Jones), the Baynard Press, the Curwen Press, and the Faviel and Cloister Presses have really admirable things on view, from the petulant and highly decorative posters of Herrick to the commercial pamphlets of Lovat Fraser and the trade labels of G. McKnight Kauffer. As to lettering pure and simple, no more choice or happy examples could be found than those of Vera Law, M. T. Holden, whose "Alphabet" is well-nigh impeccable, or the essays in calligraphy of Edward Johnston. It is pleasant to observe in most cases the consistent regard paid to the purpose of each design and the distinctly modern look which most of them assume. Their is nothing *outré*, nor is there anything too consciously traditional about these designs. The exhibition will remain open until 25 February.

GORDON HOLT.

Architectural Draughtsmanship

An Address given before the Royal Institute of British Architects, Monday, 23 January 1922

By PROFESSOR WILLIAM ROTHENSTEIN, M.A., PRINCIPAL OF
THE ROYAL COLLEGE OF ART

MR. PRESIDENT, LADIES AND GENTLEMEN,—This is really rather an alarming meeting: indeed I must explain why I am here. The only time I had the honour of being a guest at this noble Institute, we were going round architectural drawings, discussing them informally, and, as always happens in life, the professional artist, who is supposed to like vague and romantic things, was drawn to the severest drawings, while the architect was attracted by the looser painter-like things. So the suggestion was made that we might discuss this together, and here I am, in front of a rather frightening audience. And the curious thing is that, as a practising painter finding oneself among architects, one realises how very little we know about one another. There are many new things in the modern world of Art, and this is one of them; that painting and architecture were closely united in the past, is a truism. I do not even know whether the views which a humble painter holds on architects' drawings will be sympathetic to you; whether you share these views, or whether you will disagree. Perhaps one of the main points I might come to at once is this—I did touch upon it at the beginning—that I think there is a misconception among a great number of architects as to what a painter-like drawing, or a draughtsman's drawing, really is. And it is odd it should be so to-day, because the new orientation in the graphic arts is towards an almost mathematical severity. Those dreadful people whom we call the younger men, whom one of your members, with an unusual lapse of psychology in a distinguished architect and scholar, and himself a fine draughtsman, accused of being "washy" in their work, can more justly be accused of idealising the machine. Through their intellectual admiration for the hieratic art of the past they have been trying, often absurdly, to reduce æsthetic formulas to something like mathematical precision. Sir Reginald Blomfield, a very old and delightful friend of mine, accused these young people of sloppiness. You, as architects, should understand and sympathise with this curious mental attitude which is characteristic of a good deal of European painting and sculpture at this moment. Even some of us older artists are a

little envious of your use of the T-square; we would like our lines to be as precise and swift as yours. And when we turn to your drawings, hoping to find support from your precision, we find that you are inclined to neglect your own precious inheritance and to turn to something which we do not recognise as belonging to the true spirit of our own particular age. Now in your building you must of necessity be influenced by precisely the same spirit that inspires contemporary musicians, philosophers, men of science, and artists. We are all approaching the same reality from different angles. And if a great number of modern architectural draughtsmen do not know the more intelligent aims of their colleagues in art, it shows that there is something a little wrong. Each age inherits as a legacy an instrument ready to its hand, and we use any other instrument at our peril. Good taste will never make up for a sincere use of contemporary material, and no study of the past, no preference for one æsthetic principle which a past age has practised to perfection, will make up for our failure to use fruitfully the instrument we are born to work with. Whatever the fashion of our day may be, it is the natural outcome of all that has gone before. We are sometimes accused of being too eclectic and derivative; yet I find in a great number of modern architects' elevations—because, of course, I am not dealing with plans—a lack of the scholarship which is characteristic of the best art of any period; they miss precisely those elements of severity and austerity, sensitiveness to proportion and balance of rhythm, which I would have thought were the very qualities which architects would have understood better than any other artists. So in going round these drawings it happens that the nearer the elevations approach to the plan, the more I find myself in sympathy with them; and the more artistic in intention the more alien do they appear. It seems to be rather a paradox that a man brought up without any architectural training should hold these views. And I may mention that a good number of the best artists I have known were first educated as architects, and their art has in consequence gained because they had the advantage of that severe training which

gave them knowledge of construction and respect for a T-square, and it is a training I, personally, bitterly regret having missed. And you who have had this education, when you handle our common instruments, pencil and brush, should bring to bear upon it the particular qualities which are your birthright.

I believe that your clients often require from you elevations and perspective drawings which appear to most of them more human and comprehensible than your plans. Now when, in anticipation of my promise, I came to your admirable library last Saturday to consult English, French, Italian and German architectural magazines, I looked with a new interest at the elevations of modern European buildings. The closer these elevations approached your plans, the better did they appear to me to be, but in the more pictorial perspective drawings the influence of the work of those we accept as true artists was less noticeable than the fascination exercised by the more trivial and insincere painters. This surely should not be the case. We pay homage to great art, not with our lips alone, but through our work. We who practise the arts know the rare combination of qualities required to form a great artist, whether he be sculptor, painter or architect. When we become aware of someone whose vision and handiwork can survive the acute and fresh judgment of a succeeding age we may fairly expect some influence will have made itself felt upon their own age by sensitive contemporaries, and at least that later men will be actively conscious of it. Now architectural drawing has one thing in common with great painting—it is by its nature severe in statement and purpose; one would suppose architects quick to appreciate the severer elements in contemporary art, for instance. If, then, you propose to bring pictorial qualities into your work, I put it to you that it might be worth your while to understand the more scholarly and the austerer elements in modern painting and sculpture. I was surprised to find even so admirable an artist as Norman Shaw putting trees and bits of landscape into very severe and beautiful architectural elevations, which would scarcely appear to a student of art to be drawn by a contemporary of Watts, Burne-Jones or William Morris. A tree is as full of form as a roof or a buttress. We are all students; we have the Italian art of the past to tell us, if we have not time to go to nature, what design and form mean. And I should have thought that when you drew a clear and precise elevation and wished to put in

landscape surroundings, you would do this in a way which showed a sympathetic formality.

When an architect has faith in the traditions of his own great pursuit and keeps to the instruments which furnish the drawing desk, he achieves something very like the qualities of the great painters. With T-square and compasses he achieves the beautiful swift line, the kind of line every draughtsman wants to get on his paper, the line we see in the drawings of Ingres and Alfred Stevens. It seems to me a puzzling thing that this noble inheritance which architects have should be replaced by a trivial amateurishness. But we all, at one time or another, miss the way and go wandering after strange goddesses. Least of all can members of my profession throw stones.

But if I may be allowed to speak especially to the youngest members in the room, may I suggest that they inform themselves what truths the most vital philosophers, poets and men of science are pursuing. For we are all children of the same age, and to find the truth we are ourselves hunting approached from a different angle is often heartening and inspiring. Last of all, perhaps you will discover what painters are thinking about, with what ideas of form they are occupied. And if you can allow yourselves to be influenced by contemporary work which contains true quality and distinction, your own drawings may gain in weight and authority.

Of your plans I am offering no criticism: I am speaking only of elevations. When these are drawn simply and with severity, these elevations seem to me often impressive works of art. When the draughtsman is wanting in faith in the beauty of straight mouldings and of well pointed stones or bricks, in "the straight allure of simple things," in fact has no faith in the vitality of his own building, and consequently wishes to give it a picturesque appearance, he is apt to wander from the straight path. Perhaps the artist's love for the picturesque has misled him. I admit there is something extraordinarily touching in quoins and coping, cut and laid down by once busy human hands, and some element of this feeling one hopes will creep into the work of one's own hand. The appeal which old buildings make to the artist's spirit may come from the fact, or fancy, that nature adopts man's handiwork, making it, when it has been sound enough to endure, appear her own. Hence to draw buildings carelessly seems a slight upon both man's work and nature's.

Some of the most beautiful drawings I have seen have been made by architects in their sketchbooks, and certain painter friends of mine who have had the good fortune to begin their training in architect's offices, not only draw buildings with an especial sensitiveness, but show deep appreciation of architectural beauties.

Nothing gives one greater æsthetic pleasure than the just proportions and mass of a building, whether it be a cathedral or a barn, perfectly adjusted to the earth on which it appears to have grown. All the forces of nature, gravity, wind and storm, and the radiance of the sun, seem to have endowed it with almost superhuman qualities; a ship with her sails spread, seems only to evoke a similar perfection.

You young architects, then, who have greater knowledge of building than any painters can have, might well think it worth your while to study the severer ideals of the painter's and draughtsman's art which might well form the basis of your own elevations.

There is nothing I dislike more than using the past to belabour the present; it is an irritating and disheartening habit of debate. But we can learn one thing from earlier periods of art—when men are deeply absorbed by the visible world they have faith in every manifestation of life, and are not interested in decay. The architecture of Botticelli or of Crivelli is what people to-day would think the architecture of the railway station and the post office, with all the bricks and stones carefully painted, with the pointing freshly laid. There is an evident pleasure in clean carving and ironwork. To-day there appears to be an idea that the only excuse for being interested in buildings is that these shall be crooked and weather-stained.

If painters believe this, architects should know better. And in drawing your attention to the drawings of the earlier architects, I think you will discover that their elevations were singularly like the buildings depicted by the painters, and that up to the time of Canaletto painters and architects drew in the same manner.

Discussion

The PRESIDENT: I am sorry to have to announce that Sir Reginald Blomfield, who was to have spoken here this evening, is not able to be present. But he has sent us a communication, which the Hon. Secretary will read.

Mr. ARTHUR KEEN [*Hon. Sec.*] read the following letter from Sir Reginald Blomfield:—

"I am not allowed out at night, owing to a cold, and I am disappointed that I shall not be able to move a vote of thanks to Professor Rothenstein, as invited by the Council. I am sure he will say a lot of interesting things, and he speaks with all the authority of wide experience and his own admirable draughtsmanship. As, however, he has the unusual faculty of speaking from rough notes or nothing at all, and I can't be there to hear him, I have no idea what he is going to say, and instead of being able to select choice positions for my guns, all I can do is to put in a little casual sniping.

"This matter of draughtsmanship and architecture is familiar to many of us. There have been competent architects who were poor draughtsmen, but the majority of good architects have also been excellent draughtsmen—Bramante, Peruzzi, the elder Sangallo, De L'Orme, Inigo Jones, Perrault, and most of the great French architects. In England Cockerell, Burges, Devey, Street, Waterhouse, my uncle [Sir Arthur Blomfield, A.R.A.], Norman Shaw, were all good draughtsmen; and my own view is that it is difficult, if not impossible, for a man to be a great architect who

does not possess the skill of his fingers which enables him to get his ideas on to paper without the handicap of clumsy and inadequate expression.

"The Frenchmen of the end of the seventeenth century had no doubt on the subject. The founders of the French Academy in Rome insisted on draughtsmanship as the basis of design, and Blondel repeated this in the following century; but by draughtsmanship they did not mean the catchpenny tricks of the ateliers, the washings and sprayings into which architectural drawing has degenerated in France and America, and I regret to see in recent years in England. They meant sound, accurate, tenacious draughtsmanship which shirked no difficulties, which was determined at all cost to get the thing right. They did not differentiate between the drawing required by the painter and that required by the architect. For both, they insisted on a thorough training in drawing, not only for its value as a means of expression, but also as an essential gymnastic to develop in the student a sense of form, and the power of discriminating between those subtle shades and nuances which mean all the difference between right and wrong in design. I think more attention should be paid to pure drawing in our schools from this point of view—that is, as a means of training the æsthetic and critical senses.

"But from this point forward painter and architect part company. The painter pursues his drawing for its own sake; as his actual means of expression, it is the complement and coequal of his idea. But with the archi-

tect drawing is only a means to an end ; it is not his final means of expression, merely a stage on the way to the realisation of his idea in actual materials. The mistake too often made in our schools is to confuse the means with the end. The care lavished on the wonderful drawings produced in competitions is, to the architectural mind, dead waste of time ; for the thought that should be given to the design is given to its presentation on paper. Stripped of the recognised devices of the modern architectural draughtsman, there is too often little left ; and our draughtsmen might remember the remark of Burges, who said of an eminent colleague that it was a pity he couldn't build his cross-hatching. I may warn our younger brethren that experienced assessors are not taken in by these devices. What they want are straightforward geometrical drawings which show the design honestly and without any flourish of trumpets.

" Architectural illustration has, I regret to say, been so largely superseded by the short cut and the plausible look of the photograph that one seldom sees it nowadays. Photographs are generally misleading as to scale and many other points, and line drawings are much the most satisfactory form of illustration. I find that in one of the first Arts and Crafts Essays, written about 30 years ago, I suggested ' the line used in architectural illustration should be free, accurate, and unfaltering, drawn with sufficient technical knowledge to enable the draughtsman to know when he can stop. The line should not be obstinate, but so light and subtle as to reflect without effort each thought that flits across the artist's mind.' I still think that is the sort of drawing to aim at. Knowledge and understanding of what he is drawing is, of course, essential. It is given to few to draw architecture correctly by sheer accuracy of vision. Sargent did it in his ruins of Arras Cathedral, but then Sargent is a consummate draughtsman. For most of us there is but one road—incessant labour to correct our vision, train our hand, and perfect our critical appreciation of form. Please convey my regrets to Professor Rothenstein that I have missed his address."

Mr. H. CHALTON BRADSHAW [A.] : I rise with the greatest possible pleasure to second the vote of thanks to Professor Rothenstein for his suggestive and very delightful paper, on a subject in which we younger men, to whom he specially directed his remarks, are very deeply interested. With his plea for a simple presentation of architecture we are all very much in agreement. One or two minor criticisms may have surprised us. The young man entering into architecture is faced with a mass of traditions, often contradictory, and a vast array of drawings which differ according to their period and the then prevailing fashion. He sees besides geometrical conventions, various methods of drawing, all of which he may be called upon to imitate according to the work he is doing and according to whom he works for. These traditions, I think, are

very often the cause of the faults which Professor Rothenstein has criticised in the examples of drawing he has shown. Perspective drawing is not everything and very few architects are really interested in it. What does interest them is the drawing of the elevation and plan. Professor Rothenstein made one or two remarks on the actual drawing of some of the examples chosen. He pointed out the subtlety of line, the effect of thinning and thickening, and its right use in indicating different materials, and also the importance of the treatment of landscape. These all involve difficulties which we have to meet. Our training does not often allow us the time to reach the standard expected of us by a painter. Professor Rothenstein has criticised the shortcomings of architectural drawings which are not to my mind representative of a great deal of the work we have to do ; and I think that in justice to members of the Institute he ought to have shown something more representative of what we consider to be our better drawings than the pen and ink sketches which make good slides but which very few of us admire. I wish to thank Professor Rothenstein very much for his very admirable lecture and to acknowledge on behalf of the younger men, if I may, our indebtedness for so profitable a criticism from a fellow artist.

Professor GERALD MOIRA : With regard to the perspective drawings which Professor Rothenstein has been abusing, I feel that there is a difficulty which architects have : they are not able to make clients see what they are driving at by a simple straightforward elevation. Therefore, the thing to do is either to make a model or to do a perspective drawing. I feel that we all agree in wanting to get back to the plain straightforward elevation, such as we got from Adam, from Soane, and other older masters. If we look at the drawings which were done for the Bank of England, or some of the Adam's drawings, we realise what a plain, straightforward drawing can do.

Mr. THEODORE FYFE [F.] : It is very difficult to speak after Professor Rothenstein, yet I feel one should say a word for the architect. The lecturer spoke of putting figures into the perspective. I think it is very often done because the architect feels that his building is somewhat bare, that it needs some human touch. Besides, the tree or the figure gives at once an expression of relative size : they enable the architect to show the scale of his building. It is extremely interesting to hear that the architect is wrong in his ideas of draughtsmanship at the present day ; in other words, that the painter is striving for something which is on entirely different lines. That seems to be the illuminating part of the address. It is something new, although I know Professor Rothenstein is not himself a Futurist. We are trying to put into our buildings features which are reprehensible to the painter ; and the Futurist is putting things into his paintings which are unintelligible to us.

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Mr. EDWARD WARREN [F.] : It has been very interesting to listen to Professor Rothenstein and to have the point of view of an admirable painter and a consummate draughtsman, which is very valuable to architects. I think it was a little unkind of the Professor to select so many extremely back numbers of illustrated draughtsmanship, though he made his points admirably with such material as he chose. I believe there is a wise tendency among young architects to dispense, when they can, with perspective drawing, and to rely on plans, elevations and sections, unless there is an end to be served by having a perspective drawing, which, I am afraid, is often a commercial end : to persuade somebody to adopt the building, or to advertise the personality and the power of design of the particular architect, in the exhibitions at the Royal Academy and elsewhere. Perspective drawings are of little use to the designer unless he is the author of the drawing as well as of the design. I remember, in my younger days, when I had more belief in perspective drawing, making a rather nice drawing for a lady client, which I carefully coloured and showed to her. She said it was very charming, but added " Could you not make a drawing of it as it will really be ? " That rather damped me, but I did so, and was pleased to see she liked it much better. The drawing which indicates most clearly the actual physical facts is the best, and I have lately been looking with great pleasure at illustrations made in the mid seventeenth century and the early part of the eighteenth century, of buildings in London. They are delightful, and there is very little effort wasted on the drawing. The perspective is seldom given so much as a figure, or a tree, and the building is represented as being *in vacuo*, or with just the faintest indication of a ground-line. That is an unreal way of presenting a building, but it represents the actual facts of the building, and concentrates the attention of the observer on those architectural facts. In the charming views of Loggan, in the latter part of the seventeenth century, he puts in occasionally, in his college views, a tree, a wagon, or the like, but mostly the building or group of buildings is represented as *in vacuo*. The best kind of architectural drawing is, so to speak, part of the architect's tools, and there can be very great charm in the method of drawing plans and elevations by the adroit use of the line. And I think there is still greater charm in the actual working drawings to a large scale, in which you see the matured intention of the man who is carrying out the work. As Sir Reginald Blomfield has said, not every architect is a great draughtsman ; the greatest architect this country has produced was not a great draughtsman in the usual sense. Wren could express himself with extraordinary adroitness, nevertheless. I have seen, in the Bodleian Library, letters written by Wren, to the then Vice-Chancellor about the subsidence of the Library and Divinity School, which

he illustrated by charming pen-and-ink sketches, and humorous references ; for Sir Christopher was seldom without humour. There you have an instance of a very great master, a consummate master of detail and of all the co-ordinate trades and businesses which go to make a great building, who was not a great draughtsman. So that a man, if he sets out to accomplish a building of a complicated character, need not himself personally be what, in a modern sense, we should call a fine draughtsman. My own master, George Frederick Bodley, was not much of a draughtsman, but could always express precisely what he meant, and when it came to detail, nobody could express it better. His sections possessed a charm and sensitiveness which left nothing to be desired. But he did not believe much in sketching. He had seen an enormous number of buildings, and it was not necessary for him to prompt his memory by making sketches ; he observed things and remembered them afterwards in an astonishing way. I remember coming home one year from a holiday in which I had drawn portions of a church at St. Leu D'Esserent, near Creil, and I showed the drawings to Mr. Bodley. He said " Yes, I remember that church ; it had an extraordinary detail like this," and he drew one of the clerestory windows, and various other details. I said " How long is it since you were there ? " He said " Let me see ; twenty-two years." And he remembered it all. His method was to borrow a chair, take a good cigar, move the chair from place to place and observe the exterior from different points, until the cigar was exhausted, and then he noted the interior and was able ever afterwards to remember all that he saw. Making sketches is a means to an end ; it not only incites the study of mass and details, but aids a more exact observation in those not gifted as my old master was.

I also wish to express the extreme pleasure I have derived from the address.

The PRESIDENT : I feel very much obliged, as you all do, for what Professor Rothenstein has said. And I hope, and I feel sure you do, that the accident he alluded to, which led to his coming here, is the sort of accident which will happen again, and may induce some of his fellow-painters to come and talk over some of the problems which are common to both the arts. I think we have been a little surprised at what Professor Rothenstein has told us, because some of his ideas are new to us. We feel we should like to have a good many hours of thought before we can join issue with him, even on the points on which he wishes us to disagree. I think one of the points which obscured the issue is the question of the line. That has a double function in architectural drawing. We have spoken mostly to-night of elevations, and more or less of linear perspectives, the fact being that the function of an architectural drawing of a

semi-pictorial nature is partly to instruct the builder and partly to give a favourable impression of the architect's work. Professor Rothenstein, of course, knows the architect's definition of the line. The line occurs on the strictly diagrammatic elevation where "something advances, something retires, or something disappears," and it should not be used for any other purpose. The reason some of us have abandoned the use of lines at times is, that for representative purposes in the pictorial sense they are often extremely deceptive. The hard outline of steps, for example, introduced just because "something has retired," may give a false representation, and we are tempted to use other media to give an expression of texture.

I do not know whether all of you have read the *Dictionary of Architecture*, but under the heading "Loggia," there is a picture of a Town Hall at Brescia, which has been tidied up by the lithographer. It was originally a freehand drawing by my father, and when he was drawing it, a man rushed out from a shop and offered him the use of a T-square. The man was indignant with my father for not accepting it. I tell you that in order to show that what Professor Rothenstein is contending for was in full force in Brescia half-a-century ago.

Mr. Fyfe said that one of the reasons why we decorate our drawings of buildings with surroundings is to show the size of the buildings. When the Professor argues for sympathetic landscape he perhaps overlooks the feeling we architects have sometimes, that our work can only live in landscape which gives to it a contrast. There are buildings so designed that their effect is got by this contrast. I wish to add an expression of my thanks to Professor Rothenstein for the care he has taken over his address, and for the great interest it has evoked.

Professor ROTHENSTEIN: I wish only to say, in thanking you for your kind reception, what I was driving at was, that I admire architects' drawings, and I a little deplored that you admired ours. But if you do admire ours, please admire the best of them, not the weakest. There is nothing more delightful to me than going through the drawings of buildings; I have architect friends who allow me to go to their offices to do this. I have had great joy in going through them, and I feel that when you are drawing as architects, you are drawing much better than we are.

BRITISH SCHOOL AT ROME

The fifth annual Exhibition of Works submitted in open competition for the Rome Scholarships, 1922, in Architecture, Painting, Sculpture and Engraving, together with works executed in the Final Competition for the Scholarships of 1921 will be held at the Royal Academy from the 14th to the 25th February.

Mr. Robert Atkinson's Report on the Education of the Architect in the United States of America

By W. CURTIS GREEN [F.].

Mr. Robert Atkinson's Report on the Education of the Architect in the U.S.A. is an extremely interesting and valuable monograph; the Institute recognises its importance by publishing it in pamphlet form, and it should be obtained and studied by all who are interested in architectural education.

The modern American school is a compromise between the old technical schools and the *Ecole des Beaux-Arts* in Paris, and is the product of the last decade. There are twelve principal schools recognised by the American Institute of Architects. Mr. Atkinson has visited all these, and he reports very fully on the curriculum of most of them. The usual course appears to be of four years duration, the first two years including general education in languages, mathematics, physics, etc.; in the main the programme seems to be much the same as that now in being at our larger schools.

It is of interest to note the number of professors and lecturers in each school, and the help that is given by practising architects. Our own schools need strengthening in personnel to ensure depth and continuity of effort, together with more intimate co-operation from architects in practice. Many of the younger men to-day are turning their eyes towards the States; and not the least interesting part of Mr. Atkinson's report is the introductory part of it, in which he examines the cause and effect of recent American architecture.

When an architect talks about the art of architecture, the listener is conscious of what that architect actually achieves in his own work, and values his remarks accordingly. So it is in judging a system of education: what has that system produced? It is too early to say what our own day-school system has done, though we already hear discontent from architects in practice with the product of the schools: perhaps they expect too much, and perhaps students on leaving the schools expect too much; both take a short-sighted view. The one should be glad that the younger men come to them with some vision of what architecture means, and give them credit for the will and the latent, if undeveloped, ability to master the means by which alone fine architecture can be achieved—namely, by the drudgery of making clear working drawings and acquiring the ability to fulfil the moral and legal obligations of practice. The other must recognise that at least a year of hard work is necessary before he is worth his bread and butter as an assistant, and several years, with design his constant preoccupation, before he can undertake the responsibilities of practice.

Even in America, where things move more rapidly than they do here, it is too early to form more than an opinion on the value of an educational movement only some ten or twelve years old. In Mr. Atkinson's view, "rigidity" of type is the most marked characteristic of American architecture; a living up to an accepted standard rather than to the standard of their own ability. He deplores the bookish element in their work, which witnesses to a greater power of selection than of progressive thought. But is not the one a step towards the other? May it not be that this bookish element is a conscious effort to set up an irreproachable standard, and a necessary correction to licence and immaturity? Freedom in an art can only be gained by mastery of the grammar of that art; and when a tradition has been broken there are worse courses than getting back to the letter of the law. If for a space of ten years nothing in this country was produced except from the "books," it would be an outrage upon those few architects who by years of study have mastered the grammar of architecture, and to the development of architecture through their individual influence; but it would lift the mass of modern building on to a simpler and higher plane; it would force attention to the fact that there are two elements in architecture—one transitory, and the other eternal; and the layman would begin to realise which interested him most. The architect would have learned, as it would appear that his American brother has done, that to express in terms of art the spirit of the age it is necessary to apprehend the spirit of the ages. Architects like McKim, Norman Shaw, and Sir Edwin Lutyens, who have incorporated in their work great examples from the past, have shown that the abnegation of self is sometimes a service to art as it is to life.

The Americans have, by their self-discipline, achieved a general standard that an intelligent public can appreciate; the Americans realise that they have in their architects a social asset, a serious body of artists who produce art for daily use. Those who are best acquainted with American architecture expect to see it gain in freedom, returning everything that has been borrowed with interest.

If we are to carry on the great tradition of English architects, such as Wren, we have not only to learn the principles and practice of modern building construction, we have to be masters of that tradition. Mr. Atkinson thinks that the long vacation should be spent upon a modern building under a clerk of works during its construction; that would be excellent, but in that case the student should be encouraged to spend more time during the term on measuring up old buildings.

Mr. Atkinson, by his enthusiasm, and by his gift of communicating it to others, has done a lot for English students and English architecture; not the least of his services is this exhaustive report on the American schools, from which we have much to learn.

Reviews

MODERN BUILDING. Edited by H. D. Searles-Wood, F.R.I.B.A., and Henry Adams, M.Inst.C.E. Lond. 1921. [The Gresham Publishing Co.]

This new contribution to the library of those interested in building is a work in three volumes of some 150 quarto pages each, and, as its title indicates, its object is to bring the whole field of building in its latest phases up to date. Neither quite a text book nor a popular manual, it makes a wide appeal to all those, be they architects, students, officials or craftsmen, who are interested in constructional development in its widest sense. The work is divided into sections devoted to special subjects by a number of contributors, including the editors.

Volume I, after an introduction by Mr. Searles-Wood on building development relative to contracts, gives a chapter on meteorology and site conditions, which in such a work is novel and useful. The remarks on aspect, and the diagrams showing the available sun at different times of year, are particularly instructive. Those of us who are able to dress and breakfast on the east or south-east side of our houses must be aware of the value of aspect in such initiation of the day. A chapter on the revolution in housing deals with cottage homes and their lay-out. Professor Adams next contributes a long chapter of nearly ninety pages on construction, wherein we find that means for keeping the house dry are treated at length, and the volume concludes with a few pages on town planning and cottage furnishing.

Volume II opens with a section on plan and design. General conditions of health and convenience are discussed, including the relations of various rooms and their belongings, illustrated by a large number of plans and some elevations and photographs of small houses. A short section on *pisé-de-terre* building is followed by a long one on steel construction and mechanics, in which Professor Adams finds himself very much at home. Finally, domestic water supply receives full and useful treatment.

Volume III is mostly devoted to matters of sanitation—plumbing, fittings, and sanitary laws—with a profusion of sectional and other drawings. We should like to have seen a little more encouragement for the open terrazzo floor channel, with reduction in traps and plumbers' work, on lavatory ranges. Following this is a section on modern day school buildings. We know the Girls' High School, Clapham, as a very excellent example of a school at the date of its erection, but it seems rather a pity to have incorporated a central hall type of building, which this substantially is, when such form of planning is now definitely a thing of the past, more particularly as this is the only school illustrated.

The book concludes with a long and valuable section on useful timbers of the British Empire, by Dr. Chandler, who is well qualified to bring this important subject to wider notice. The work is well "got up," and the volumes are of manageable size. The diverse nature of its contents has no doubt rendered classification difficult, but we do not quite follow what was in the editorial mind in the arrangement of the contents, and are rather inclined to think that a closer association of these contents under such headings as planning, construction, and materials might have been preferable. This is a trifling criticism, and the joint editors have produced a work which, while it meets the needs of the student and the home builder, also contains a great deal of information not to be readily obtained in so compact and palatable a form.

ALAN E. MUNBY [F.].

JERUSALEM, 1918-1920. *Being the Records of the Pro-Jerusalem Council during the period of the British Military Administration. Edited by C. R. Ashbee. 40, Lond. 1921. £2 2s. [John Murray, Albemarle Street, W. Published for the Council of the Pro-Jerusalem Society.]*

"Zion is a city compact together." "It is this compactness or unity, so characteristic of Jerusalem, that the Society has set itself to preserve." With this objective no reasonable Englishman would find fault, or so one would think. But, as a matter of fact, intelligent people are to be found who view the over-arched streets with a frightened horror, and it is against this ultra-civilised point of view that the Pro-Jerusalem Society sets itself to fight. In the pages of the record are to be found mention of many useful activities aiming towards the upkeep of old buildings, traditions, and crafts, and the work of the Society seems in the main to be upon sound lines of conservation whenever possible.

This attitude of reverence having been adopted towards the antiquities and the mediæval aspect of the city, the Society has pursued a wise course in seeking expert advice from persons whose long association with the city places them in a position of authority in regard to its archæology and local colour.

The Dominican Fathers who contribute interesting passages in the text are Frenchmen, and it shows some broad-mindedness on the part of the English Government that these learned gentlemen, in every way fitted to advise, should have been consulted. If this spirit of tolerant co-operation can be maintained, there is some hope for the future unity and progress of the city, for without goodwill and good sense a place so riddled with conflicting interests and multi-sectarian enthusiasm would be doomed to perpetual strife and discord.

The Turks managed the religious aspect of things by installing Mahomedan guards at all the older and more famous Christian shrines, a tradition which Lord

Allenby wisely continued, and it seems that Turkish law is being administered, subject to minor amendments in detail, at the present time.

The Society made the cleansing and opening up of the existing fortifications one of its earliest works. A great deal of rubbish had to be dug out and removed from the citadel itself, and this process of necessary repair is being carried on steadily as funds permit.

The ancient city wall, one of the most complete in the world, was also freed from dirt and encumbering masses of masonry which had been built upon and across its rampart walk. A few of these obstructions had been erected by the Turks, but most of them were the result of the enterprise of private persons, who sought to enlarge their premises by including a piece of the old wall. Some of the encroachments had been permitted in pre-war days, but the wall, as a whole, was still a veritable rampart, patrolled by armed sentries as a means of protection against marauders.

Jerusalem in the hands of the Turk doubtless had many drawbacks, but in compensation it afforded a spectacle of a mediæval city in what might be accepted as something approaching to mediæval custody. There was an air of genuineness in all the quaint methods adopted, and from this point of view Jerusalem has lost through the Turkish defeat.

With a park zone about its fosse and tourists instead of sentries perambulating the path behind its battlements, the venerable wall of Jerusalem has ceased to live, and has become a survival comparable to a museum specimen.

The march of the times and that of the British Army are responsible for these changes, but visitors to Jerusalem will miss the living interest brought into the old city by this connection with ancient military precaution. In 1909 three out of the six principal gates of the city were closed at night, and only reluctantly opened by the guard after the applicant had told his name and business. In a similar way the wall top was generally kept closed to visitors unless conducted by some one known to the authorities, and not always then.

A plan of the proposed Jerusalem park system, by C. R. Ashbee, shows how the old walled city may be left isolated in a belt of natural scenery, free from encroachment by inharmonious houses of the modern Jewish colonies. The word "park" is misleading, as it is proposed to leave large portions of the zone under Fellahin cultivation as at present, subject, let us hope, to increased care in the upkeep of ancient monuments, tombs, etc., coming within the area.

Beyond the "park" zone the New Jerusalem still consists of horrible slums of undesirable Jewish immigrants, and the town plans of W. H. McLean, 1918, and of Professor Patrick Geddes, 1919, still await the confirmation or rejection of financial and political circumstances still hanging in the balance.

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Whatever may happen in the future, the influx of poor and improvident Jews, lacking in all the elementary instincts of citizenship, constitutes a menace to the proprieties of the Holy City and to the health of its inhabitants. Under Turkish rule Jews were forbidden access to Palestine, and although several thousands of them settled there under European and American protection by the assistance of assumed nationality, the nuisance due to their imperfect civilisation was kept within bounds. With increasing numbers strict measures will be required to teach and enforce sanitation among the new population if grave risk of pestilence is to be avoided. Although supposed to be interested in the associations of the land and the monuments of their forefathers, the immigrants show not the slightest respect for the ancient sites other than the few indicated by their own special traditions.

Père Vincent, writing of a Jewish tomb containing inscriptions of the Herodian epoch, adds: "Nous avons en le regret de constater que cette tombe, encore accessible en 1914, avait été transformée en cloaque et totalement obstruée par les plus malsaines immondices apportées journellement de la colonie juive voisine."

This Zolaesque description is not only true but typical, and, unless the question of immigration is handled with great firmness, the result may equal the squalor of the New Quarter left derelict in Rome by the financial crash after a period of frenzied speculation. Inhabited by unemployed, the white fronts of the gigantic houses and blocks of flats were stained with filthy droppings, and sewage trickled in sluggish streams down the marble stairs. The Turkish method of keeping a place clean was to station upon it a man with a whip, with full authority to use it on all transgressors. It was a partial method and limited as to extent, but it had the advantage of appealing to the meanest intelligence.

Complaints upon other pages of the Records show that the English occupation has felt the need of a radical improvement, but has not yet had the courage to enforce it.

A more cheerful side of the book is concerned with the repair of the Dome of the Rock by Mr. Ernest Richmond, F.R.I.B.A., who has revived the tilemaking industry within the precincts of the Haram-esh-Sherief for the purpose of supplying tiles for the denuded areas on the walls, at present left bare or rudely cemented. Tiles of good quality have already been produced to the ancient designs, and Mr. Richmond's experience in restoration work in Cairo is a guarantee that the result will be satisfactory.

Recent repairs executed under the Turks involved the use of indifferent tiles of European manufacture, inferior in design and character to anything that is likely to be produced on the spot.

The revival of weaving and glass-working is being attempted, and the produce should find a market among

the many visitors and pilgrims if placed before them in such a fashion as will interest them.

The visitor to an Oriental city all too frequently returns with trumpery objects which, if not manufactured in Birmingham, are the nearest approach to its style that the native labour master can produce or procure.

The illustrations of the Records include many beautiful photographs of native buildings, and some which show the success of the citadel gardens, where trees and flowers have been persuaded to grow in spite of the tendency of the townsfolk to uproot and carry off the plants at the first opportunity.

WILLIAM HARVEY.

NOTE.—In the review of Mr. E. A. Webb's important work on the *Records of St. Bartholomew's Priory and of the Church and Parish of St. Bartholomew the Great, West Smithfield*, the author was stated to be the elder, instead of the younger, brother of Sir Aston Webb. The subscription price of the book was £3 3s. net; the price to non-subscribers is £4 4s.—[Ed.].

WILLIAM BUTTERFIELD.

The indenture of apprenticeship of William Butterfield, architect and Royal Gold Medallist, has recently been presented to the Institute by his nephew, Mr. Lindsay Butterfield, teacher of design at the L.C.C. Central School of Arts and Crafts.

From this document we learn that William Butterfield was apprenticed to Thos. Arber, builder, of Horseferry Road, Middlesex, to learn the art, trade or business of a builder, house decorator and furnisher. It would seem, therefore, that William Butterfield, senior, a chemist of Norfolk Wharf, Strand, intended his son to be a builder, although, on the other hand, Mr. Maurice B. Adams, in his paper, "Architects from George IV to George V" (read before the Glasgow Institute of Architects in 1912), states that William Butterfield was a student member of the Architects' Society in the year in which he was apprenticed.

The indenture is dated 3 March 1831, the term of five years to count from 7 September 1830. On the back of the parchment is a note, "1833 7th June Re Arber," below which is a circular stamp faintly outlined in red with what appears to be the word "bankruptcy" on it; the apprenticeship may therefore have terminated in 1833 owing to the bankruptcy of Thos. Arber.

It is interesting to note that John F. Bentley was also intended by his father to follow the building trade, and was apprenticed for five years to a firm of builders, Winslow and Holland, of Bloomsbury, but his talent for architecture was so conspicuous that, at the suggestion and introduction of Holland, he was transferred to the office of Henry Clutton, the architect, three years before the expiration of his apprenticeship.

JOHN E. NEWBERRY [A.].

The Late Ernest Newton, C.B.E., R.A.

By PAUL WATERHOUSE, M.A., PRESIDENT R.I.B.A.

Some men grow old and die : others die having never grown old. This is the happier lot for them, for their friends the harder. Our dear friend Newton went through, it is true, those attacks on the body which mean with most men a surrender—or a partial surrender—of that spirit that keeps the flag flying. But he came out from them in triumph and his friends rejoiced in his untarnished courage—in the giving back to them of the whole personality of the man they loved. Then a day or two of fear—and the fear fulfilled. It is difficult to speak of these troubles, they are too inward to be laid bare, but it is due to Newton's memory to say that few men, even in the goodly fellowship of architects, can have left behind him so many fellow-workers to whom his going forth was not a mere occasion for a passing tribute and a conventional regret but a downright sense of sorrow and loss.

Many others have spoken, and spoken well of his work, his art, his unselfish character and his quiet forces. Many more could bear testimony to acts of kindness, words of encouragement, pledges of good fellowship, which he offered to friends in the inner and even in the outer circles of his acquaintance. And perhaps it is almost unfitting that any expression of more personal sorrow should find expression in the cold publicity of print. But I think not ; and for this reason. In Ernest Newton the faculty of making and keeping

friendship of more than common depth was so great and so integral a part of his essential nature that any recount of his life that left unnoticed this lovable characteristic would be in that degree incomplete. This power of friendship touched and tinged not only the intimacy of his unprofessional life but his relations with those who knew him chiefly or solely as a brother architect. To him architecture was as truly as to any man not merely a creative art but an inevitable brotherhood. It was in the spirit of brotherhood that his bright and merry nature moved among his fellow craftsmen. He gave to me, I know, more than I deserved. But deserved or not, I would not for worlds have been without that free gift of his, and I know that I shared it with many others. As one of his successors, I feel strengthened by the brightness of his blameless example—his ideals were exceptionally high—as his companion in more than one society, social and professional, I have felt the grace of his companionship ; and as one of his survivors, I feel the blank of a bright light extinguished. I cannot find his enemies : I cannot count his friends. How do the words run ?

" If life be short and art be very long

Thrice happy he who fills his life with art,

Who fills his art with grace, and fills his part

In grace and art and life with friendships' song."

The verse seems to come near to my meaning.

For the purposes of record we give a list of the houses and other buildings which Mr. Newton designed, with the dates on which they were illustrated in *The Builder* :—House of Retreat, Lloyd Square (8 November 1884) ; house at Weybridge and additions to " Little Menlo," Beulah Hill (26 May 1888) ; St. Swithin's Church, Hither Green—details by Professor W. R. Lethaby (28 September 1895, and 26 December 1896) ; St. Barnabas' Vicarage, Beckenham (23 June 1888) ; house at Wokingham (27 August 1898) ; Martin's Bank, Bromley (3 December 1898, and 1 December 1900) ; house at Sutton Coldfield (23 November 1895) ; house at Haslemere (24 November 1896) ; house at Burley-in-Wharfedale (21 October 1899) ; house at Chislehurst (26 October 1901) ; " G ebeldans," Wokingham (14 September 1901) ; " Steep Hill," Jersey (28 September 1901) ; house at West Green, Winchfield (14 and 28 June 1902) ; lodge and cottages at Overbury (23 June 1904) ; house at Wimbledon (14 May 1904) ; house at Bickley (25 June 1904) ; house at Triscombe, Somerset (29 April 1905) ; St. George's Church, Bickley (11 November 1905) ; house at Godstone (12 May 1906) ; house at Wokingham (12 September 1908) ; Dawn House, Winchester (17 July 1909) ; Luckley House, Wokingham (17 July 1909, 3 February 1911, 3 March 1911) ; " Upton Grey," Winchfield (11 December 1909, 3 February 1911) ; Ludwick House, Hatfield, Ardenrun Place, Blindley Heath, and " Four-Acre," Winchfield (3 February 1911) ; Oldcastle House, Dallington, Sussex (21 June 1912) ; houses at Kingswood and house at Burgh Heath, Surrey (16 May 1913) ; house in the Grand Duchy of Luxemburg (10 October 1913) ; proposed houses at Goring and Dorking (20 March 1914) ; house at Jouy-en-Josas, France (8 May 1914, 9 May 1919) ; bank, Lombard Street, E.C., and proposed chapel, Bournemouth (7 May 1915) ; houses on Sanders

Estate, Denmark Hill, and Whiteley Homes (5 May 1916) ; Bullers Wood House, Chislehurst ; Upton Grey Manor House ; new buildings, Bromley, Kent ; the Chapel, House of Retreat, Lloyd Square, E.C., and the stables, Bickley Hall (16 August 1918) ; Uppingham School Memorial (11 June 1920, and 6 May 1921) ; house at Burgh Heath, Surrey, and " Flint House," Goring (7 and 14 May 1920) ; house at Kingswood, Surrey (14 May 1920) ; Monast'ire du Carmel—Messrs. E. Newton, R.A., and Sons, and Mr. W. Nicholls, architects (18 June 1920 ; 6 May 1921, and 15 July 1921).

Mr. Newton died from pneumonia after only five days' illness, at his residence, 17 Blomfield Road, Maida Hill, on Wednesday, 25 January. His funeral took place on 28 January at Golder's Green Crematorium and was attended by a large and representative gathering, including Mr. William G. Newton, Mr. Harold Newton (his sons), Sir Aston Webb, P.R.A., Mr. John W. Simpson, Past President, Mr. Michael Waterhouse (representing the President in his unavoidable absence), Mr. Lawrence A. Turner (Master, Art Workers' Guild), Sir John Burnet, A.R.A., Mr. E. S. Prior, A.R.A., Mr. Gilbert Scott, A.R.A., Mr. Bertram Mackennal, A.R.A., Mr. W. R. Lethaby, Sir Banister Fletcher, Mr. Ian MacAlister (Secretary R.I.B.A.), Mr. John Slater, Mr. Alan Slater, Mr. J. A. Gotch, Mr. Henry V. Ashley, Mr. Edward Warren, Mr. H. D. Searles Wood, Mr. Guy Dawber, Mr. Walter Cave, Mr. Arthur Keen (Hon. Secretary R.I.B.A.), Mr. Wm. Woodward, Mr. Edwin T. Hall, Mr. W. Curtis Green, Mr. W. E. Riley, Mr. C. Harrison Townsend, Mr. Theodore Pyfe, Mr. Louis Ambler, Mr. F. Winton Newman, Mr. Arthur Stratton, Mr. F. R. Horns, Mr. Vincent Harris, Mr. Herbert Shepherd, Mr. Stephen Ayling, Mr. Frederick Chatterton, Mr. Walter Lamb (Secretary R.A.), Mr. George Northover, Mr. R. Dircks.

Correspondence

NEW ROADS AND OUR COUNTRYSIDE.

14 St. Mary Abbot's Terrace, Kensington, W.14.
2 February 1922.

To the Editor, JOURNAL R.I.B.A.,—

SIR,—The Art Committee are beginning to receive complaints from various parts of the country that some of the new roads and new road widenings are doing irreparable damage to the appearance of the countryside and some of our villages.

Everyone recognises that these roads and widenings are now very necessary, and indeed overdue, but our complainants suggest that more care could be exercised by detours or different methods of widening to preserve the beauty of the villages and the scenery through which they pass.

The Art Committee will be most grateful for information from architects or others, who know of definite cases, accompanied if possible by plans, photographs and other particulars, and also suggestions for alternative routes.

It will, in addition, be useful to know if any action has been taken by the residents, and if so, with what result.—Yours faithfully,

MAURICE E. WEBB [F].
Hon. Secretary, Art Committee.

[At the request of the Art Committee the Council have written to the Ministry of Transport on this subject.—ED.]

ARCHITECTURAL EDUCATION AND ITS EFFECT ON OVERCROWDING.

36 Victoria Street, S.W.1.
23 January 1922.

To the Editor, JOURNAL R.I.B.A.,—

SIR,—The apparent conviction underlying Mr. Colcutt's note of warning contained in the opening sentences of his recent Paper on Architectural Education must surely afford matter for the immediate and serious consideration of the governing Councils of our professional bodies, if not of the whole community concerned.

The warning is of such satirical importance that perhaps I may be excused for quoting it:—

"Architects have suffered, and are still suffering, perhaps more than any other body of men, from the effects of war. The outlook is still gloomy. But, in spite of this indubitable fact, students and yet more students are encouraged to enter the schools."

Taken in conjunction with this warning, Mr. Guy Dawber's estimate of approximately 2,000 pupils studying architecture at the present time is, to say the least of it, alarming, and does it not justify Mr. Colcutt in his fears for the future of our profession?

What percentage of this 2,000 will, at the completion of their training, ever practice their adopted profession

as principals? Shall we put it at 25 per cent.? Perhaps a high estimate. Then what is to become of the remaining 1,500 men? In spite of Professor Reilly's assertion that the object of the schools is not to provide *cheap* assistants, I make bold to say the majority of these students *will* become assistants, not practising architects, and through no fault of their own will remain in that category for the remainder of their professional careers.

The Architects' and Surveyors' Assistants' Professional Union is a young body, but who will say its existence is not an urgent necessity? In spite of its youth there are on its unemployment register at this date some 250 names of assistants without work, many of whom are without means of subsistence. The figure increases daily, and yet, what proportion of the total number of unemployed in our profession this figure represents I do not know, nor have I the means of ascertaining. One can only conjecture.

The problem is one which calls for the instant and intense consideration of the whole profession. It brooks no delay. The overcrowded state of the profession linked with the apathy of its members is a tragedy. It is, therefore, cheering to receive Mr. Colcutt's warning, encouraging to note Sir Aston Webb's reiteration of it, and gratifying to observe the acknowledgement of the danger by the Vice-President of the R.I.B.A. when he said, "I think therefore that as an Institute it behoves us to consider whether we are right in encouraging so many students to enter the profession at the present time, when the prospect of their making a living is so poor."

Acting on a considered resolution of the National Convention of Delegates held at Leicester in September last, my Executive Council instructed me to approach the Council of the R.I.B.A. to seek its co-operation in the setting up of a joint committee, representative of the whole profession, to consider what steps might be taken to regulate the flow of new blood into the profession.

Cannot this now be done?—Yours faithfully,

JOHN B. HECTOR,
Hon. General Secretary, Architects' and Surveyors' Assistants' Professional Union.

The University, Sheffield.
25 January 1922.

To the Editor, JOURNAL R.I.B.A.,—

SIR,—In the debate which followed Mr. Colcutt's Paper there appeared to be a consensus of opinion amongst those architects who do not happen to be concerned with any of the "Recognised Schools" in an official capacity that the number of students now entering an already crowded profession is on the increase.

No allowance appears to have been made for the fact that all figures pertaining to this question for the last three years are quite abnormal because of the fact that

the majority of the students in most of these schools during the period referred to would normally have been included in the preceding years when the war necessitated the suspension of all such activities.

For example, in the Sheffield school last session, of the whole-time students the ratio of ex-service Students (working on Government grants) to ordinary paying students was as 3 to 1. This session, however, whilst the total number of whole-time students has slightly decreased, the ratio is exactly reversed.

The decline in the pupilage system has, in this locality at least, resulted in a far greater diminution in the number of men entering the profession than the increase in the number of students attending the schools in the same district.

In 1910-1911 the number of articulated pupils in South Yorkshire was to be reckoned by the score, but this year, after the most exhaustive inquiries, I have had difficulty in tracing six in the same area, whilst the number of students in attendance here is just under twenty.

With regard to the assumption that the heads of the schools are apt to encourage students who may not be endowed with the natural aptitude for a successful pursuit of the art, I need only say that I have recently most strongly advised a change of vocation in two cases, even going so far as to communicate with the parents, but without avail. The comparative independence of the salaried teacher places him in a position which renders the giving of such advice much more likely than the position formerly held by those gentlemen who were known as "pupil farmers," and whose income was in many cases chiefly derived from the premiums they received from the pupils.

When a student enters a university course in architecture all his relatives are aware of the fact, and hence the student is apt to feel that a change of vocation after a year or two will reflect on him, and so he continues his course in spite of the warning he may have received from the teacher in charge of his training.

With the remaining portion of the views expressed at the meeting, however, everyone will agree, and the heads of the recognised schools will, I feel sure, be very much indebted to Mr. Colclutt for his most stimulating address.

F. RADFORD SMITH [A.].

SIR CHARLES RUTHEN AND NATIONAL HOUSING.

3 Queen Street, Cheapside, London, E.C.2.
26 January 1922.

To the Editor, JOURNAL R.I.B.A.,—

DEAR SIR,—The charge brought by Sir Charles Ruthen against "the entire profession" of practising architects that we are profiteers, and that the "prime responsibility for the financial failure of the great Go-

vernment Housing Scheme rests with architects," is so obviously absurd that it would be beneath notice but for the fact that Sir Charles is unfortunately not only an architect, but the President of the Society of Architects* and Director-General of Housing to the Ministry of Health.

This being the case, his statements are sure to create uneasiness in the minds of those members of the public more or less dependent upon architects for advice, and one effect of Sir Charles Ruthen's reckless charge must be to prevent many people from consulting architects if they can possibly manage to do without them. The natural consequence will be to rob many architects of work, with the inevitable result that, being deprived of expert advice, these people will lose infinitely more than any possible saving in fees.

From the date the Government scheme was put before the public, it has been pointed out by architects that the proposals were financially impossible; that under the Government scheme the State subsidy would be the equivalent to a capitalised sum of:—

(a) Private enterprise £150, afterwards increased to £250.

(b) Public utility societies £354, afterwards increased to £620.

(c) Local authorities £1,560 for every £1,000 spent upon housing.

It is a simple matter of arithmetic; let the Director-General of Housing consider it.

An economic rent must be sufficient to meet:—

1. Interest on capital outlay:

- (a) Cost of site.
- (b) Roads, sewers and development.
- (c) Buildings, including architects' fees.

2. Working expenses:

- (a) Maintenance.
- (b) Management and collection.
- (c) Rates, taxes and insurance.

3. Sinking fund, or depreciation account.

4. Reserve fund for contingencies, improvements, empties and bad debts.

In the case of a local authority, 1 and 3 were to be met by loans repayable (capital and interest at 5 per cent.) in 50 years.

	£	s.	d.	
This absorbed	59	0	0	per annum.
Item 2 absorbed	57	5	5	per annum.
Item 4 absorbed	5	0	0	per annum.

£121 5 5 per annum is therefore an economic rent, or 46s. 8d. per week for house costing £1,000.

* Since writing the above Sir Charles Ruthen has ceased to be President of the Society of Architects.

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It was estimated that the highest rent obtainable would be 16s. 8d., leaving a deficit of 30s. per week; or a loss of £78 per annum (capitalised at 5 per cent. = £1,560) on every £1,000 spent.

Architects' fees may be ignored (like the 1d. rate) in considering the financial soundness of the scheme.

I shall be surprised if Sir Charles can give us an instance where the cost of a cottage has been so appreciably reduced by the omission of architectural "frills" that fees (if omitted also) and frills together would save £60 out of the total loss of £1,560. How could architects profiteer, or how, in any way, be responsible for the financial failure of the Government's mad scheme?—Faithfully yours,

JOHN E. YERBURY [L.].

UNIFICATION AND REGISTRATION.

*Haywards Heath.
18 January 1922.*

To the Editor, JOURNAL R.I.B.A.,—

SIR,—In the voluminous correspondence in reference to Registration I have seen no reference to one important point. Comparison is frequently made between the proposals of the Institute and the dentists' action in admitting unqualified men. The dentists certainly did admit all unqualified men of sufficient standing as dentists with authority to practise as such, but they did not grant them the valued letters of L.D.S.

Now, sir, the vast majority of Associates worked hard and put themselves to considerable expense in proceeding to London to sit the succession of examinations, particularly if they lived in a small provincial town with no schools to guide them architecturally; and they value these letters A.R.I.B.A. in proportion to the difficulty of attaining them.

By all means admit outside people of good status (and there are many) to full equality and voting powers as *Members*, forming a new class if necessary, and let the Licentiates join this class if they wish; but leave us the distinction for which we have worked and which amounts in effect to a degree. It might be said that many of us could and should proceed to the Fellowship; but the qualification of private practice for seven years and the nomination by (I think) three Fellows preclude this in many cases, even if we desired it. I myself don't know even one Fellow by sight.—Yours, etc.,

A. J. McLEAN [A., 1909].

THE "IDEAL CLASS ROOM."

Mr. George H. Widdows [F.] will introduce a discussion on the "Ideal Class Room" at a meeting of the Medical Officers of Schools Association, which will be held at 11 Chandos Street, Cavendish Square, W.1, on Wednesday, 22 February, at 5 p.m. The Association has invited the Institute to send two representatives to take part in the discussion.

PRESENTATIONS TO MR. HERBERT TAYLER AND MR. GEORGE NORTHOVER.

There was a good attendance of members of the Institute, who in response to Mr. Woodward's letter, published in the JOURNAL on 10 December, had contributed towards testimonials to Mr. Herbert G. Tayler, the late assistant secretary, and Mr. George Northover, the late editor. In the unavoidable absence of the President, Mr. Arthur Keen (Hon. Secretary) occupied the chair. The presentations (clocks with suitable inscriptions and envelopes containing cheques) were made by Mr. Woodward on behalf of the subscribers. Mr. Woodward referred eulogistically to the long and able services of each of the retired officials, stating that Mr. Tayler held a record of service of forty-seven years, and that Mr. Northover had been with the Institute for over twenty-eight years. Mr. Tayler had done especially useful work in connection with the Board of Architectural Education and the Examinations; and Mr. Northover had worked with zeal and energy in the best interests of the Institute Journal and the Institute. Mr. Arthur Keen spoke of the unfailing tact and courtesy of both officials, which had created between all who were brought in contact with them ties of lasting esteem. Mr. Tayler, in his reply, referred to his pleasant relations with the Secretaries of the Institute over a long period of time—Mr. Charles Eastlake, Mr. William H. White, Mr. W. J. Locke in the past, and later with the present Secretary, Mr. Ian MacAlister. Mr. Northover expressed the pleasure which he had derived from his long association with the Institute. Mr. Lewis Solomon, Mr. W. A. Pite and other speakers testified to the high regard in which both the retired officials were held by members of the Institute.

OLD CAMBRIDGE MEN AND THE CAMBRIDGE SCHOOL OF ARCHITECTURE.

A number of architects who are old Cambridge men have just formed a Club with a view to helping, wherever possible, the work of the Cambridge School of Architecture. As a first step, they have agreed to double the donation of £50 given this year by the R.I.B.A. to the funds of the School, and they propose in future to meet once a year, either in Cambridge or London, to establish relations with the Staff of the School and to keep in touch with its work generally. Mr. Maurice E. Webb, F.R.I.B.A., has been elected Chairman of the Club, and Mr. J. Alan Slater, A.R.I.B.A., Hon. Secretary and Treasurer.

ARCHITECTS' AND SURVEYORS' ASSISTANTS UNEMPLOYMENT INSURANCE.

A sum of £25 has been voted by the Council of the Institute to meet the expenses of preparing the scheme for an Unemployment Insurance Society.

Fees for Housing Work

JOINT MEETING OF THE PRACTICE STANDING COMMITTEE AND HOUSING ARCHITECTS

MR. JOHN SLATER [F.] in the Chair.

A meeting of the Practice Standing Committee and Housing Architects was held on 17 January 1922 in order that the three delegates appointed by the General Body to confer with the Ministry of Health upon the question of fees, might obtain the views and advice of those who had had most to do with Housing Work under the Government programme.

The three delegates, Messrs. H. T. Buckland [F.], Francis Jones [F.] and Herbert A. Welch [A.] were present, and had the advantage of hearing the opinions of many speakers at a meeting that was well attended and representative. The Chairman suggested that the vast quantity of correspondence that had been received from members all over the country upon the question of fees should be handed to the delegates for their perusal, it being quite impossible to deal with it at the meeting.

The importance of the definition of the word "scheme" was emphasised by several speakers, and attention was called to the unfairness of the rule that travelling expenses were not allowed inside a twenty-five miles radius under Memoranda 51 (D) and 52.

After a long discussion, the meeting passed a resolution on Professor Adshead's motion, seconded by Mr. C. B. Willcocks, by which the delegates were requested to proceed with the negotiations with the Ministry, and to seek further advice if required from the Practice Committee in consultation with a representative appointed by the President of each Allied Society.

A further resolution requested the Council to take strong action with regard to the attack on architects by the Director of Housing, who, in a speech at the Society of Architects on 12 January, had attributed to them the prime responsibility for the failure of the Government Housing Policy.

Notes by the Practice Committee

It has been decided by the Practice Standing Committee that, while strict confidence will, as hitherto, be observed in the case of matters affecting individuals, some opinions of the Committee on subjects of general interest can, with advantage, be communicated to members through the medium of the JOURNAL. It is proposed therefore that notes on such subjects will from time to time appear in the Journal. The following items have been recently passed for publication by the Committee:—

(1) TELEGRAPH POLES.—The Committee's attention has been drawn to the Telegraph (Construction) Act 1916. This Act appears to extend the Telegraph Acts so as to

empower the Postmaster-General to place telegraph lines under, upon, or over, any land or building belonging to private owners, subject to the owners having the right of reference to a police magistrate, or county court judge, acting as an arbitrator. Architects desirous of being acquainted with the law on this subject are advised to obtain copies of the Act of 1916 and of the Telegraph Act 1878.

(2) TAXED COSTS.—The Committee advise architects who are engaged to give evidence as expert witnesses in the Courts to obtain from their clients an undertaking in writing that they will be paid the full fees charged by them, irrespective of whether or not such fees may be reduced in the "taxation" of costs on the conclusion of the case.

(3) POWERS OF MEMBERS OF BUILDING COMMITTEES.—The Committee have had complaints from architects who have acted on the instructions of members of building committees only to find, subsequently, that such members had no power to bind their committee. The Committee advise architects, before accepting instructions from members of building or other committees, to make sure that such members have power to give instructions on behalf of their committee. A lack of caution in this respect may result in an architect devoting a good deal of professional time to work for which he may in the end find himself unable to obtain any remuneration.

EXHIBITION OF BRITISH ARCHITECTURE IN PARIS.

The Council of the Institute have decided to undertake the financial responsibility for the Exhibition of British Architecture at the Paris Salon this year.

ROYAL GOLD MEDALLIST.

The Council of the Institute propose to submit to His Majesty the King the name of Mr. Thomas Hastings, of New York, as the recipient of the Royal Gold Medal for Architecture for the current year.

BOARD OF ARCHITECTURAL EDUCATION.

The Problems in Design submitted by candidates for the Final Examination and the Special War Examination will be on exhibition in the Galleries of the R.I.B.A., from Friday, 10 February, to Friday, 17 February, between the hours of 10 a.m. and 5 p.m.

NOMINATION OF CANDIDATES FOR MEMBERSHIP.

The attention of the Council has been drawn to the fact that members occasionally sign the nomination forms of candidates with whom they are not personally acquainted. By-law 3 is quite definite on the point. The members who sign the form thereby certify their personal knowledge of the candidate. Members are particularly requested to bear this fact in mind when they are asked to support candidates for membership.

"THE DESIGNERS OF OUR BUILDINGS."

Copies of Mr. Cope Cornford's recently published book with the above title can be obtained from the office of the Institute. Price 5s. Postage 9d. extra.

Allied Societies

YORK AND EAST YORKSHIRE ARCHITECTURAL SOCIETY.

The dinner of the York and East Yorkshire Architectural Society was held at the Royal Station Hotel, York, on 2 February.

Amongst the large company present were the Lord Mayor (Alderman W. H. Birch), Mr. Paul Waterhouse (President, Royal Institute of British Architects), Mr. A. E. Munby, M.A. (President, York Society), Mr. Ian MacAlister (Secretary, Royal Institute of British Architects), Mr. Stephen Wilkinson (Vice-President, York Society), Mr. J. M. Dossor (Vice-President, York Society), Mr. E. A. Pollard (Hon. Treasurer, York Society), Mr. J. E. Reid (Hon. Secretary, York Society), Messrs. J. Ferguson, S. R. Kirby, Geo. Benson, A. B. Burleigh, S. Needham, W. E. Parkinson, T. Snowden, A. G. Stevenson, S. G. Highmoor, A. Cowman, F. Dyer, F. T. Penty, Kenneth Ward, J. Vause, R. Jackson and C. Leckenby.

Apologies for absence were read from Mr. W. H. Brierley, Mr. L. Kitchen (ex-President, York Society), and the Presidents of the Sheffield and Leeds Societies.

At the conclusion of the dinner, Mr. J. M. Dossor (Hull), in proposing success to the Royal Institute of British Architects, said he had been a member of the Institute for many years and had derived great benefit from this association. The real aim of the Institute was to bring the whole of the profession into a homogenous body, so that the younger members would uphold the profession in the esteem of the general public.

Mr. Paul Waterhouse (London), returning thanks on behalf of the Institute, opened his remarks with a reference to the late Mr. Ernest Newton, whose death had left a conspicuous blank in his life. Mr. Newton's life had been one of splendid service, one of complete self-sacrifice for his profession, and during the difficult times of the war he rendered invaluable service to the Ministry of Munitions. Mr. Waterhouse thanked the York Society for its hospitality and referred to the growing unity between the Institute and the provincial societies. London was the centre of a circle represented by the allied societies. Not only this, but the circle was beginning to take the form of a sphere with outposts all over the globe. He paid a cordial tribute to Mr. Munby, whose link with the York Society he greatly valued. He emphasised the fact that the touch that the Institute had with the non-Metropolitan societies was a true touch. The Institute always welcomed suggestions from provincial societies. The question of unification, instead of being as many thought, the inspiration of a few London faddists, was in reality the outcome of provincial feeling. The allied societies had helped the Institute in the solution of many problems, and those outside London had done incalculable service. After referring to the recent unjustifiable remarks of Sir Charles Ruthen, Mr. Waterhouse, in conclusion, alluded to the old-time pupilage. That system had its good points, but architectural education had now become organised, and this tempered with the pupilage system was all for the good. Architectural schools had stimulated many youths to study for the profession. He was afraid, however, that all would not be able to get employment. Nevertheless he did not

advocate any lessening of the system, but masters of such schools should not be led away by a number of successes. The real test was when a pupil had to find his own level. He admired the conscientious master, who told parents whether their sons should go on or not. He spoke very highly of the architectural profession as one that gave an architect great pleasure.

Mr. MacAlister proposed the health of the Allied Societies, and said that he had been fourteen years Secretary of the Institute, and this was the first occasion that he had had the pleasure of being entertained by an allied Society. He congratulated the York Society on its choice of President, and dwelt upon Mr. Munby's knowledge and wide experience. There were forty professional societies allied to the R.I.B.A., twenty-three of these being in the United Kingdom. Nothing in the architectural world could be compared with the organisation for completeness and scope. The Institute allowed perfect local freedom in its allied societies and was always ready to listen to advice from them, and was doing all it could to establish intercommunication between each.

Mr. Munby, in replying, said that his people had long been associated with the public work in York, and he would like to go down to fame as being the means of getting the President and Secretary of the Institute down to York. He was pleased to say that these gentlemen were very willing to come. Visitors of this kind did so much good to the provincial centres and greatly stimulated local interest. He reminded the company that this day was the anniversary of an event in history, when Jonathan Martin set fire to the Minster approaching 100 years ago. He hoped the public would not think the Society was celebrating that event. In reference to architectural education, he would like that to be as broad as possible. A student should be able to tackle all problems, from designing an altar cloth to conducting an arbitration. The York Society greatly appreciated the work of the Institute and its Secretary.

Mr. Stephen Wilkinson proposed the health of the Lord Mayor. Personally speaking, he would like to have seen more visitors at the dinner, because many people were so ignorant of architecture that they did not know what the function of an architect was.

The Lord Mayor, in replying, said that he had accepted the invitation with a certain amount of trepidation, because he was a builder. People wondered who was the most important, the architect or the builder. He said the Tower of Babel could not have had an architect, hence the confusion. It was fitting that the Society should meet in York. York was a city full of architectural interest. In the old times a workman was left with more individual liberty than at present, and much work was left to his initiative. He felt that such conditions could not appertain to-day. Contrasted with those times, workmen now showed less interest in much of the intricate work with which they had to deal. Architecture was a creative art, but it was almost impossible for an architect to-day to do his best. He was hampered by conditions. He regarded the architect and builder as a combination of art and craft. It was up to the architect particularly to make our streets beautiful, and if they had more freedom and less financial restrictions to contend with they would rise to the occasion.

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BIRMINGHAM ARCHITECTURAL ASSOCIATION.

Mr. Paul Waterhouse, P.R.I.B.A., was a guest at a dinner held by the Birmingham Architectural Association on Friday, 13 January. The guests included the Lord Mayor of Birmingham, Alderman David Davis, and the presidents of several of the architectural societies of the country.

After the dinner Mr. Waterhouse delivered an address, which he commenced with a very hearty acknowledgment of the reception which had been offered to him. He was anxious, he said, to express the warmest appreciation, not only of the personal friendship shown in the invitation to be present, a friendship which on his side was as sincere as that shown by his hosts, but also of the token which this invitation and reception showed of the very admirable bonds of unity which connected the R.I.B.A. with its Allied Societies. Perhaps there never was a time in the history of professional organisation in which the uniting links were so strong.

Were any special evidence to be sought of the strength of this spirit of co-operation, it could be found undoubtedly in the way in which the non-metropolitan societies had worked together with the central body in elaborating and encouraging the scheme of unification now before them. After a few words dealing with this particular topic, the President of the Institute spoke of the nature of the considerations which make association under a metropolitan centre so necessary, and explained how little such a centralisation was derogatory to those who, while not living at the metropolitan base, were for all that as important—being outposts of the republic—as the administrative headquarters.

He urged the necessity for vitality in the non-metropolitan groups, pointed out how essential such vitality was to the mother society, and urged them never to be afraid of coming forward with suggestions, schemes, or offers of collaboration.

Passing to the topic of education, he insisted on the great value of the present education schemes, not only to the young men who were the immediate beneficiaries of the schooling, but also to the architectural community at large, affecting as it did the welfare of posterity and the future of architecture. He went further and pointed out that the very interest taken by established practising architects in this provision for the younger generation was in itself a fascinating link of union among the architects of the day.

Few professional bodies were ahead of architects in this enthusiastic promotion, sometimes at great personal sacrifice, of the well-being of those young men who were to be their successors and supplanters.

After dealing briefly with the alarm felt by some pessimists as to the possible overcrowding of the profession, Mr. Waterhouse concluded his speech by a serious word or two on the motto of the Institute, and the great aims which the profession had before it.

The meeting concluded with a hearty vote of thanks to the President of the Institute, proposed by Mr. H. T. Buckland, F.R.I.B.A.

Higher Buildings for London

At the Business Meeting on March 6th the Council will invite the General Body to discuss the question of Higher Buildings for London.

With a view to assisting members to arrive at a considered opinion on the subject, the Council have directed that the following reports should be published in the current number of the Journal :

INTERIM REPORT

OF THE LONDON BUILDING ACT COMMITTEE OF THE
ROYAL INSTITUTE OF BRITISH ARCHITECTS TO THE
COUNCIL OF THE ROYAL INSTITUTE OF BRITISH
ARCHITECTS, 8 NOVEMBER 1921.

Origin of Committee.—Following the reading before the Institute in March 1920, of a paper by Mr. Austen Hall on "Departmental Stores," and of a paper by Mr. Delissa Joseph on "Higher Buildings for London," this Committee was appointed by resolution of the Council on 12 April 1920, as follows :—

"Reform of the London Building Acts : It was resolved that the following members be appointed as a special Committee to consider and report upon the reform of the London Building Acts."

On 19 July 1920 the Committee was reappointed and constituted as follows :—The President, The Honorary Secretary, Mr. Walter Cave, Mr. E. Guy Dawber, Prof. S. D. Adshhead, Mr. A. W. S. Cross, Sir Banister Fletcher, Mr. George Hubbard, Mr. C. Stanley Peach, Mr. E. Stanley Hall, Mr. Digby Solomon, Mr. J. J. Joass, Sir Alexander Stenning, Mr. Delissa Joseph, Mr. Austen Hall, Mr. Sydney Perks, Sir Henry Tanner, Mr. Mathew Dawson, Mr. C. A. Daubney.

At the first meeting the following officers were appointed :—

Chairman : The President.

Vice-Chairman : Mr. Walter Cave.

Joint Honorary Secretaries : Mr. George Hubbard and
Mr. Austen Hall.

At the third meeting held on 8 June 1920, Mr. Austen Hall resigned the Joint Honorary Secretaryship, and Mr. Delissa Joseph was appointed in his place.

Between 27 April 1920 and 8 November 1921, the Committee held twelve meetings, and the delegates attended six conferences.

Area of Enquiry.—The Committee decided that they would, in the first instance, devote their attention to the questions of Higher Buildings and Cubical Contents, leaving to a later date the consideration as to whether the amendment of the London Building Acts was required, for the following reasons :—

1. That the adequate development of London is seriously restricted by the present application of the London Building Act and the General Powers Act.

2. That its development must be facilitated in order to keep pace with the present unsatisfied demands for commercial and residential accommodation.

3. That a reasonable increase in the height of buildings is the only method of meeting the demand for increased accommodation.

Materials and Evidence.—The Committee had before them memoranda from Mr. Horace Cubitt, from Mr. C. A. Daubney, and from Mr. Samson, of New York, and a memorandum prepared by the Incorporated Association of Retail Distributors, outlining different aspects of the question of higher buildings, and they also had before them correspondence from Mr. Swarbrick, of Manchester, and Mr. Aubrey Thomas, of Liverpool.

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upon the conditions and regulations as to higher buildings in those cities.

They also had before them diagrams supplied by Mr. Aubrey Thomas of the Royal Liver Building, Liverpool, about 300 feet to the top of the topmost storey, being the highest commercial building in this country. They also had before them diagrams which were prepared by Mr. Delissa Joseph, showing the effect of the proposals under consideration upon typical buildings as follows:—

1. A domestic building in a street over 80 feet wide.
2. A domestic building facing a park.
3. A commercial building facing an open space.
4. A commercial building facing the River Thames.
5. A commercial building between other buildings facing a square.

At a later date they had before them diagrams prepared by Sir Henry Tanner showing the relative superficies of English and American buildings, and a schedule of the relative cubical content thereof.

Reform by Administration and not by Act of Parliament.—At an early stage of the discussion it was pointed out that the proposed increase in the height of buildings and the proposed modifications with regard to the cubical contents could both be attained without altering the Acts of Parliament, because, under Section 47 of the Building Act of 1894, the height of a building is limited to 80 feet, with two storeys in the roof, but the clause permitted the Council to sanction higher buildings; while under the General Powers Acts of 1908 the regulations limiting to 60 feet the height of buildings of large cubical contents were arrived at by resolution of the Council, and could therefore be modified by resolution.

The submission that these two important items can be dealt with by administration, without the expense and delay in altering the Acts of Parliament, confirmed the Committee of their anxiety to at once deal with these matters, irrespective of the general question of the reform of the Building Acts.

After a series of prolonged and detailed discussions of the various suggestions under these headings the Committee invited Mr. Delissa Joseph to prepare a draft scheme which would incorporate their views, and this scheme, after very careful consideration and further discussion, was amended, and adopted in the following form:—

SCHEME of the London Building Act Committee of the Royal Institute of British Architects, for modifications in the application of the Acts dealing with the Height of Buildings and the Cubical Contents thereof.

I.

Scheme for Modification in Application of Acts.—That, as Section 47 of the London Building Act of 1894 is as follows: "A building (not being a church or chapel) shall not be erected or subsequently increased to a greater height than 80 feet (exclusive of two storeys in roof and of ornamental towers, turrets or other architectural features or decorations) without the consent of the Council," and is therefore of a permissive character, the London County Council should now announce its willingness to modify its regulations so as to enable it to consider applications for higher buildings on the following lines:—

1. In the case of a building in a street of greater width than 80 feet, an increased height should be permitted equal to the greater width of the street, with two fire-resisting roof storeys above same, but in no case a greater height than 150 feet, exclusive of two storeys in the roof.
2. That, in the case of buildings opposite parks, squares, and public gardens not less than 150 feet wide, or facing commons, open spaces, and the riverside, or when facing down the length of a street, such buildings should be permitted to a height of 150 feet exclusive of two storeys in the roof.
3. That, in the case of the City of London, buildings 120 feet high, exclusive of two storeys in the roof, should be permitted in any street, irrespective of its width or date.

4. That such consents should be subject to adequate safeguards as regards health, means of escape and fire attack.

II.

That the Regulations of the London County Council under Part 3 of the London County Council General Powers Act of 1908 having been arrived at by resolution of the Council, should be so modified, by resolution of the Council, as to permit buildings of greater cubical content to be constructed notwithstanding that such buildings exceed 60 ft. in height, subject to the other safeguards as provided in the regulations.

Conferences with Public Bodies.—When the above conclusions had been arrived at the Committee resolved that before presenting their report to the Council, it was desirable that they should ascertain, as far as possible, what would be the views of the public authorities and societies with regard to their proposals, and they therefore appointed deputations to wait upon the various bodies, with a view of laying their scheme before them and ascertaining their views thereon.

A deputation consisting of Mr. A. W. S. Cross, Mr. Delissa Joseph, Sir Henry Tanner, Mr. Sydney Perks, and Mr. Digby Solomon waited upon the London Building Acts Committee of the London County Council on 21 February 1921.

A deputation consisting of Mr. A. W. S. Cross, Sir Henry Tanner, Mr. Delissa Joseph, Mr. George Hubbard, Mr. Digby Solomon, and Mr. C. A. Daubney, waited upon the City Lands Committee of the Corporation of the City of London on 9 March 1921.

A deputation consisting of Mr. A. W. S. Cross, Sir Henry Tanner, Mr. C. A. Daubney, Mr. Digby Solomon, Mr. Austen Hall, Mr. George Hubbard, and Mr. Delissa Joseph attended before the Fire Brigade Committee of the London County Council on 21 April 1921.

A deputation consisting of Mr. George Hubbard, Sir Henry Tanner, Mr. Sydney Perks, Mr. Stanley Hall, Mr. C. A. Daubney, Mr. Austen Hall, and Mr. Delissa Joseph, attended before the Metropolitan Branch of the Society of Medical Officers of Health on 11 May 1921.

A deputation consisting of Mr. Sydney Perks, Mr. Austen Hall, Mr. Stanley Hall, Mr. C. A. Daubney, Mr. Mathew Dawson, and Mr. Delissa Joseph attended before the London Society on Monday, 10 October 1921.

A deputation consisting of Sir Henry Tanner, Mr. C. A. Daubney, Mr. Digby Solomon, and Mr. Delissa Joseph attended a conference with the Incorporated Association of Retail Distributors on Wednesday, 19 October 1921. (This Association includes all the large London stores, such as Selfridges, Whiteleys, Harrods, Dickins and Jones, John Barkers, etc.)

At the request of his colleagues, Mr. Delissa Joseph addressed each of these conferences, setting out in detail the views of his Committee and the contentions upon which those views were founded, being careful to point out, in each case, that these were the views of his Committee only, and that they had not yet been submitted to the Council of the Institute, but that his Committee were anxious to obtain the views of the authorities and societies concerned before offering their report to their Council.

In each case the delegation was received with great courtesy and listened to with great attention.

Results of Conferences.—In the case of the London Building Acts Committee of the London County Council, the chairman suggested our seeking a conference with the Fire Brigade Committee.

In the case of the City Lands Committee the following resolution was passed:—

"That having heard the deputation, this Committee are in sympathy with the views expressed that buildings in the City of London should be allowed to be erected to a height of 120 feet, with two storeys in the roof, subject to the questions of conditions of health and protection from fire being properly considered."

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In the case of the Fire Brigade Committee of the London County Council, the Chairman promised that the whole scheme should be considered by a joint meeting of the Building Acts Committee of the London County Council and the Fire Brigade Committee of the London County Council, after which they would communicate to us their decision.

Subsequently the following letter was received from the Clerk of the London County Council:—

"With reference to your letter of 15 February last on the subject of higher buildings for London, I am directed to state that the Council has given prolonged and careful consideration to the scheme, prepared by the Building Act Committee of the Royal Institute of British Architects, for modifications in the application of the London Building Act so far as they relate to the height of buildings and the cubical extent thereof, and also to the arguments in support of the scheme which were urged by the representatives of the Building Act Committee of the Institute at the conference with the representatives of the Council.

"As you are aware, the limit of the height of buildings imposed by Section 47 of the London Building Act, 1894, applies unless it is waived by the Council, and as regards buildings coming within Section 17 of the London County Council (General Powers) Act, 1908, the limit of height imposed by the regulations made by the Council under the Act, may be waived as the Council thinks fit. The Council does not consider that the circumstances justify any action being taken in the direction suggested by the Building Act Committee of the Royal Institute, and I am to state that the Council has decided to continue its present practice of dealing on its merits with each case which comes before it."

With regard to the conference with the Metropolitan Branch of the Society of Medical Officers of Health, the following resolution was passed:—

"This Meeting of Medical Officers of Health of London is of opinion that, having regard to the fact that construction of rooms underground would thereby be discouraged, the proposals of the Building Act Committee of the Royal Institute of British Architects in regard to higher buildings are reasonable, provided adequate safeguards are established in relation to lighting and ventilation and the convenient arrangement of sanitary accommodation."

Subsequent to the meeting with the London Society the following communication was received from that society:—

"The Committee of the London Society has very carefully considered the scheme of the Royal Institute of British Architects Building Act Committee for the modifications in the application of the Act dealing with the height of buildings and the cubical contents thereof, and after hearing the opinions formed by the Building Act Committee are strongly of opinion that a general increase of the height of buildings such as is proposed would be inadvisable and detrimental to the amenities of London, and are content that the present law should stand, especially as the London County Council have the power to consent to an increased height where considered advisable. The London Society are further of opinion that the height of buildings in London should be related to the width of the streets."

Subsequent to the conference with the Incorporated Association of Retail Distributors the following resolution was forwarded by them:—

"That the Incorporated Association of Retail Distributors having on 19 October 1921 had a conference with the delegates of the Building Act Committee of the Royal Institute of British Architects, and having considered their scheme in regard to 'Higher Buildings and Cubical Contents' of buildings in London, and having considered and answered the questionnaire prepared by that Committee, resolve that they do cordially support the scheme of the Building Act Committee of the Royal

Institute of British Architects, and that they consider the proposed modifications in the administration of the London Building Acts and the General Powers Act are essential for the adequate development of the commercial and industrial interests of London, and are in the best interests of the adequate progress of the country of which London is the metropolis."

Conclusions.—As a result of their investigations, extending over eighteen months, the Committee have come to the following conclusions:—

1. That there are no practical difficulties affecting structure, fire proofing, means of escape, water supply, and the attacking of fire in case of buildings 150 feet high.

2. That the case for buildings of this height facing the river, open spaces, squares, and parks cannot reasonably be objected to.

3. That the case in favour of high buildings in streets such as Portland Place, 125 feet wide, is equally reasonable.

4. That the same view holds good to high buildings in such places as Lincoln's Inn Fields, 645 feet wide.

5. That the case for the City of London stands alone, as it is the one square mile in which is concentrated the centre of the financial, shipping, and banking activities of the Empire.

The need for higher buildings in the City area is imperative, as it is vital that business men should be able to find offices within a few yards of the exchange or centre where their particular business is dealt with. To increase the height of buildings in such situations is the only way in which additional office accommodation can be provided in the restricted areas in which it is urgently needed.

6. That the restriction on the height of large cubical content buildings occupied by the great stores constitutes the restriction of trade adversely affecting national prosperity.

7. That the increase in domestic accommodation at park-side and river-side and in the wide streets leading from the centre, such as Clapham Road, 117 feet and upwards in width, will contribute towards the solution of the housing problem in Central London.

8. That higher buildings will produce larger assessments that will form the security for municipal loans, to be devoted to the widening of congested thoroughfares.

9. That it thus being essential to provide for the great interests concentrated in the City of London, to provide for the accommodation for the great commercial interests in Central London, to provide further domestic accommodation for those who do not require to live on the outskirts, and desire to be readily accessible to their work without being involved in long railway journeys, the administration of the Acts of 1894 and 1908 should be now adapted to the changed conditions, and that the London County Council should be urged to exercise its permissive powers in a more generous spirit, on the lines of the scheme prepared by this Committee.

Recommendations.—In conclusion your Committee is satisfied that the case for higher buildings in the situations defined by them and for buildings of larger cubical content, calculated either vertically or horizontally, where provided with the necessary safeguards, has been completely established, and that efforts should continue to be made to induce the London County Council to meet the reasonable requirements which have been put forward and so strongly supported by the representatives of those specially interested, namely, of the large stores and shopkeepers and the City of London and approved by the London Medical Officers of Health.

In view of the importance of the subject, this Committee suggests to the Council that a general meeting of members should be convened to consider this report.

Very complete minutes of the proceedings of your Committee and, with one exception, verbatim reports of their conferences with the various authorities and societies, have been made for the purposes of reference.

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LIST OF ATTENDANCES OF COMMITTEE EXTRACTED FROM ATTENDANCE BOOK.

Prof. S. D. Adshead..	1	Mr. J. J. Joass ..	3
Mr. Walter Cave ..	1	Mr. Delissa Joseph ..	12
Mr. A. W. S. Cross ..	3	Mr. Arthur Keen ..	4
Mr. C. A. Daubney ..	8	Mr. C. Stanley Peach	1
Mr. E. Guy Dawber ..	0	Mr. Sydney Perks ..	9
Mr. Mathew Dawson	6	Mr. John W. Simpson	1
Sir Banister Fletcher..	6	Mr. Digby L. Solomon	9
Mr. H. Austen Hall ..	4	Sir Alexander Stenning	0
Mr. E. Stanley Hall ..	9	Sir Henry Tanner ..	8
Mr. George Hubbard	9		

NEW MEMBERS APPOINTED 1921-1922.

Mr. Paul Waterhouse	0	Mr. H. Searles Wood	1
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HENRY TANNER, *Chairman of meeting of 8 November, 1921.*

DELISSA JOSEPH

GEORGE HUBBARD *Joint Honorary Secretaries.*

Note.—A minority report signed by Mr. Arthur Keen is attached.

BUILDING ACT COMMITTEE.

November 1921.

As a minority report Mr. Arthur Keen wishes to substitute the following for the general conclusions arrived at by the majority of the Committee:—

That any general increase in the height of buildings would be detrimental to the amenities of London.

That the powers possessed by the County Council of permitting an increase of height in particular cases are adequate and are exercised in a reasonable way.

That the open spaces and wide streets of London are of great value in securing the free circulation of air, and that their usefulness in this respect should not be impaired by permitting the erection of high buildings adjoining them.

That the principle of increasing housing accommodation by means of high buildings is a reactionary one and undesirable from the point of view of family life.

That in the case of buildings which, in order to secure unity of design, are required to be of the height allowed by the Building Act the restriction of the height of the top floor to 60 feet in cases of large cubical contents is no longer necessary or desirable in view of the methods of construction and fire attack now available.

ARTHUR KEEN.

10/11/21.

On receiving the above report, the Council referred it to the Art, Practice and Science Standing Committees, and to the Town Planning and Housing Committees. The reports of these Committees are appended:

REPORT OF THE ART STANDING COMMITTEE.

The Art Standing Committee have very carefully considered the Interim and Minority Reports of the R.I.B.A. Building Act Committee dated 8 November 1921, dealing with those portions of the London Building Acts which affect the height and cubical contents of London buildings.

The Committee have also had the benefit of a detailed explanation of the report from the Hon. Sec. of the Building Act Committee, Mr. Delissa Joseph [F.], who brought diagrams of the kind of buildings which would, in his opinion, result if the report were adopted. Mr. Arthur Keen [F.], who signed the Minority Report, attended on the same occasion, and gave the Committee the reasons which had led him to sign the Minority Report.

The Art Committee *nem. con.* resolved to support the Minority Report and to oppose the definite proposals of the Building Act Committee as outlined under heads 1, 2, and 3 in Section I. of the

report, but are in agreement with the conclusion No. 6 under Section II. that in the case of the large cubical content buildings of the great stores a limit of 60 feet for the highest floor upon which the public may do its shopping is unreasonable.

The Art Committee desire to add the following observations:—

1. PUBLICITY.

The premature publicity which has been given to this interim report and the conclusions reached therein by the representatives of the Building Act Committee is much to be deprecated. The conclusions appear to have been reached solely from the commercial point of view, with no regard whatever to the architecture of the City of London or to the interest of the general body of its citizens, the protection of whose amenities is one of the privileges entrusted to the R.I.B.A. by charter. It is much to be hoped that the Council will take steps to prevent in the future such public action by members of committees appointed to investigate subjects of such a controversial nature as this, before their reports have either been considered by the Council or by the members of the R.I.B.A.

2. EXAMPLE OF NEW YORK.

The Committee are impressed with the fact that in New York, where much experience has been gained of high buildings under infinitely better conditions of sunlight and atmosphere, public as well as architectural opinion has veered round, and very drastic height-limiting laws have now been passed for New York, based on street widths and a system of zoning. At the recent Convention of American Architects held this year great stress was laid upon the undoubted fact that when high buildings are permitted a demand inevitably grows up for higher and higher ones, until eventually the streets become too small for the number of inhabitants and the services of light, drainage, water supply, etc., become so excessively overloaded that reconstruction becomes necessary at great public expense, if the health and amenities of the people are not to suffer for the benefit of the few.

3. GENERAL HEIGHT INCREASE.

The Art Committee cannot protest too strongly against the theory of the Building Act Committee that higher buildings should be permitted throughout whole areas in the City without regard even to the width of the street, and in the remainder of London without any regard to the character of the neighbourhood, neighbouring buildings, and the general appearance which the backs of these buildings, according to Mr. Joseph's own diagrams, will surely present with their narrow glazed-brick areas, towering above the buildings behind them.

As regards the City, where the average width of the streets may for all practical purposes be taken at 25 feet, the proposal to allow buildings 120 feet high everywhere is preposterous, and would turn our City streets into badly lighted, badly ventilated areas.

4. POSSIBLE EXCEPTIONS.

The Art Committee desire, however, to express the opinion that on carefully selected sites an occasional building higher than the rest of the street may be an advantage in breaking the sky-line and so relieving the monotony of a long stretch of buildings of equal height. As Mr. Keen points out in the Minority Report, the L.C.C. have power to allow this—a power which the Committee feels should be exercised very carefully, and only in the case of buildings which, from their nature or site, should be of a dominating character. Whether the L.C.C. acting alone is the proper authority to exercise this power is another matter which may be worth the attention of the R.I.B.A. The Committee consider that some system of zoning or marking of such special sites on a carefully thought-out plan, having due regard to the neighbourhood, surrounding build-

JOURNAL OF THE ROYAL INSTITUTE OF BRITISH ARCHITECTS

ings, width of street, and other public amenities, is essential before any fuller use is made of the L.C.C.'s powers, if the scale and character of London architecture is not to be destroyed.

5. PRESENT LAW.

It must be pointed out that, with the possible exception of Kingsway, 100 feet wide, there is no street in London in which the present law allowing buildings 80 feet high has been fully used, and that therefore there is still scope for increased accommodation without any general increase in height.

6. SMOKE PREVENTION.

The question of smoke prevention in cities is intimately connected with the height and size of their buildings, and the Committee hope that the attention of the L.C.C. will be called to the urgent necessity in London of dealing with this problem, and the present need for the full use of their powers in this respect.

7. HEALTH AND COMMERCE.

The Committee, in conclusion, feel that the health of the community is an important factor in its commercial prosperity, and that, as far as buildings affect health, the natural rule to follow is to have low buildings and wide streets in northern climates, and high buildings and narrow streets in southern ones.

To achieve this, lower, not higher, buildings are wanted in London, with houses and gardens, not huge blocks of flats, as suggested in this report, on the outskirts wherein to house the working population and their children.

REPORT OF THE PRACTICE STANDING COMMITTEE.

That as there does not appear to be any structural difficulty in erecting buildings to the height or cube suggested, and that as questions of fire prevention, air space, escape, sanitation, etc., would be taken into account by the London County Council in dealing with any proposals for such buildings, the Practice Standing Committee give their general approval to the Interim Report of the London Building Act Committee, and further desire to draw attention to the second paragraph on page 4 of the Report.

REPORTS OF THE SCIENCE STANDING COMMITTEE.

(A) The Science Standing Committee, having considered the Interim Report, suggest that a General Meeting should be called in order that the General Body of Members of the Royal Institute should have an opportunity of expressing their opinions upon the subject.

(B) The Science Standing Committee, having read the Report of the Art Standing Committee upon the Interim Report of the London Building Acts Committee of the R.I.B.A., desires to associate itself strongly therewith; but owing to the importance of the subject the Science Standing Committee still maintains that the Interim Report of the London Building Acts Committee should be submitted to the whole body of members of the R.I.B.A.

REPORT OF THE TOWN PLANNING AND HOUSING COMMITTEE.

The Committee have considered very fully the Interim Report of the Building Acts Committee referred to them by the Council, and now submit to the Council the following detailed observations upon the conclusions of the London Building Acts Committee which are tabulated on page 3 of the Report:—

No. 1.—The Committee have no observations to offer, the attacking of fire in high buildings being a matter for the Fire Brigade.

Nos. 2, 3, and 4.—The Committee are in agreement with the opinion expressed by the London Society, and consider that the permissive powers of the London County Council in regard to the height of buildings are sufficiently wide.

No. 5.—The Committee disagree with the conclusions of the Building Acts Committee, and consider it essential that the height of buildings in the City of London should bear some relation to the width of streets.

No. 6.—The Committee consider that the height of buildings occupied by the large stores and in excess of the usual cubical extent is a question chiefly affecting the Fire Brigade.

No. 7.—The Committee consider that the present limit of 80 feet with two storeys in the roof is more than sufficient for domestic accommodation.

No. 8.—It is the opinion of the Committee that the height of buildings in London should not be dictated by considerations of municipal finance.

No. 9.—The Committee have no wish to see the permissive powers of the London County Council weakened in any way, and are satisfied that that body will continue in the future as in the past to exercise those powers on liberal and progressive lines.

Finally, the Committee point out that the opinion of the London Medical Officers of Health is based upon the suggestion that underground rooms will be abolished, and that there appears to be nothing in the Report to suggest that this will be the case.

The Committee have also considered the Minority Report signed by Mr. Arthur Keen, and have to inform the Council that they are unanimously in general agreement with the principle expressed in that Report.

N.B.—The Committee in their report have dealt only with the questions raised by the London Building Acts Committee. The latter have not raised the aesthetic side of the question, which the Town Planning and Housing Committee consider of much importance.

REPORT OF THE COUNCIL.

On receiving the above reports, the Council gave careful consideration to the whole matter, and finally approved the Report of the Art Standing Committee.

BRITISH ENGINEERING STANDARDS ASSOCIATION.

Mr. Lewis Solomon (*F*) (who represents the Institute on the Committee of the Association) has presented to the Library a copy of the Index List of British Standard Specifications and Reports. This list has been compiled in view of the increasing number of Specifications available, and for the purpose of easy reference; it will be published annually, and an addendum will be issued from time to time so as to keep members in touch with the latest Specifications issued.

EDINBURGH ARCHITECTURAL ASSOCIATION.

Owing to the death of Mr. W. T. Oldrieve, the President of the Edinburgh Architectural Association, the senior Vice-President, Mr. T. Aikman Swan, A.R.I.B.A., has been elected to the Presidentship, and Mr. J. Inch Morrison, Licentiate R.I.B.A., has been elected to the office of senior Vice-President.

Mr. Sydney Tatchell (*F*) has been appointed by the Council of Almoners the Surveyor to Christ's Hospital on the retirement of Sir Alexander Stenning (*F*), who has acted in this capacity for upwards of twenty years.

Competitions

R.I.B.A. COLOUR COMPETITION.

A sum of £200 has been placed in the hands of the President of the Royal Institute of British Architects by an anonymous donor for the purpose of instituting a competition for a *business building*, facing on an ordinary London street, in which "colour" (of a permanent nature) would be the dominant feature.

The Competition will be open to all members of the profession, but it is earnestly hoped there will be a strong response by students of the Architectural Schools in London and elsewhere.

A diagram, drawn to scale, will be issued, showing the floor lines and the centre lines of the principal doorways. These must be adhered to by competitors.

It is suggested that pronounced architectural features should be confined to the entrances and the topmost storey.

Competitors have a free hand as regards style and colour treatment. The ground floor might be a bank or insurance office, the remaining floors might be flats or offices. Three premiums (£100, £50, and £20) will be awarded to the best colour designs, irrespective of architectural excellence. A fourth premium of £30 will be awarded to the best architectural design. *Colour must be suggested by the use of permanent material only.* Designs in oil paint, fresco, scraffito and so on, will not be admissible.

It is suggested that competitors should aim at a broad treatment in masses rather than in disjointed detail, and should bear in mind that what might be admirable and appropriate in designing a wall-hanging could easily become vulgar and offensive when applied to a building.

With regard to the material competitors may suggest in their designs, it may be of service to them to know that a scheme for facing concrete blocks with various materials, such as marble, terra cotta, mosaic or copper plates, has been devised and successfully produced. It has been found that the cost of facing a building with either of these materials would be at least 25 per cent. cheaper than an ordinary stone facing. Competitors, however, are not invited to submit estimates.

The terra cotta facing can be made in any colour, and not highly glazed. It is possible to obtain this material with a gloss like that of old Wedgwood or similar ware. The maximum size (at present attained) is 21 inches by 15 inches, in columns up to 24 inches diameter. It should be borne in mind that there might be slight irregularities on the face and variety in the tone of colour. This would give a play of light which some designers may think desirable.

Of course marble facing can be of much larger dimensions. Competitors must suggest only such marbles as are known to withstand the deleterious effects of the London atmosphere. Samples of these marbles and a piece of old Wedgwood as a sample of glazing on terra cotta can be seen at the R.I.B.A.

Stone or granite may be used at the discretion of the competitor.

Designs must be prepared as actual working drawings, but shadows may be cast where they would actually occur. As the Assessors are practical Architects and Painters and not potential clients, there need be (and must be) no pic-

turesque foreground. However, to give scale to the building, one figure of average height will be allowed as being desirable.

Premiated designs to become the property of the donor. The authors may, if they desire, make copies of their own works.

The successful designs will be published.

Drawings :

(1) Elevation to $\frac{1}{8}$ -inch scale.

(2) Detail of Entrance or portion of Top Storey to $\frac{1}{2}$ -inch scale.

(3) Section to $\frac{1}{4}$ -inch scale of front wall, showing the depth of reveals, also the depth of any recessed features.

Premiums :

First	£100	Third	£20
Second	£50	Fourth	£30

Assessors : SIR EDWIN LUTYENS, R.A. ; T. E. COLL-CUTT, Esq., P.P.R.I.B.A. ; Professor GERALD MOIRA ; WILLIAM WALCOT, Esq. Should either of the Assessors be unable to act, the President will nominate one in his place. The designs, by the courtesy of the Royal Institute of British Architects, will be exhibited at 9, Conduit Street, W.1, after the award has been made.

The competition will be conducted under the Regulations of the Royal Institute of British Architects, in so far as these are applicable.

Each design must be accompanied by a declaration signed by the competitor, or joint competitors, stating that the design is his or their own personal work, and that the drawings have been prepared under his or their own supervision. A successful competitor must be prepared to satisfy the Assessors that he is the *bona fide* author of the design he has submitted.

No design shall bear any motto or distinguishing mark ; but all designs shall be numbered by the Secretary, R.I.B.A., in order of receipt.

All questions relating to the conditions must be received by the Secretary, R.I.B.A., not later than February 28, 1922.

Designs must be received by the Secretary, R.I.B.A., 9 Conduit Street, W.1, not later than May 1, 1922.

TRUJILLO'S STATUE OF "LIBERTY."

The Competitions Committee desire to call the attention of Members and Licentiates to the fact that the conditions of the above Competition are unsatisfactory. The Competitions Committee are in negotiation with the promoters in the hope of securing an amendment. In the meantime, Members and Licentiates are advised to take no part in the Competition.

IAN MACALISTER,
Secretary.

COMPETITIONS OPEN.

Auckland War Memorial.
R.I.B.A. Colour Competition.
Dundee War Memorial.

The conditions and other documents relating to the above competitions may be consulted in the Library.

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R.I.B.A. Certificate Book

A Certificate Book for the use of architects is now among the Institute's publications, and needs only to be known to be as widely used as the almost universal R.I.B.A. Form of Contract. The book is the result of a suggestion made by Mr. Francis Hooper [F.] at the annual general meeting in 1920. The production of the book was delegated by the Council R.I.B.A. to the

members of the Practice Committee, and duly approved. A useful criticism in regard to the general appearance of the form was received from Mr. F. W. Troup [F.], a member of the committee, and the final proof of the form was submitted to and approved by Mr. A. W. S. Cross (Vice-President), the then chairman of the committee. Very considerable trouble was



Architects Address _____

Certificate No. _____ 19____

Previous Instalments £ _____

Present Instalment £ _____

Total to date £ _____

_____ hereby Certify that the sum of _____

is due to _____

of _____

on account of Works at _____

under the terms of the Contract therein dated _____ 19____

£ _____

To _____ Architect

Contractors Receipt

Received from _____ 19____

the sum of £ _____

in payment of Certificate No. _____ dated _____ 19____

£ _____

Stamp

ARCHITECTS' CERTIFICATE BOOK (MUCH REDUCED FACSIMILE)

Practice Standing Committee, who appointed a sub-committee consisting of Mr. Delissa Joseph [F.], Mr. W. Henry White [F.], and Mr. Horace Cubitt [A.] to consider and recommend as to the form of certificate to be adopted. The sub-committee held several meetings and decided on a very simple form as being the best for adoption in the circumstances. The form recommended by the sub-committee was circulated to all

taken by the late editor of the JOURNAL, in arranging for the production of the Certificate Book in a manner worthy of the traditions of the Institute.

The book, containing 100 certificate forms, is now on sale at the Institute price 8s. 6d., post free 9s. 6d. A facsimiled copy (reduced) is given above. An order form will be found on the slip attached to the cover of this issue of the JOURNAL.

Notices

BUSINESS MEETING, 6TH MARCH, 1922.

An election of members will take place at the Business General Meeting, Monday, 6th March, 1922. The names and addresses of the candidates (with the names of their proposers) found by the Council to be eligible and qualified for membership according to the Charter and By-laws, and recommended by them for election, are as follows:—

AS FELLOWS (6).

- LENTON:** **FREDERICK JAMES**, M.C. [A. 1912], 16 Broad Street, Stamford; 36 Scotgate, Stamford. Proposers: Mr. Walter J. N. Millard, Mr. Ernest Newton, Mr. Arthur Keen.
- PICTOR:** **ARTHUR JOHN** [A. 1894], 14 Queen Square, Bath; Bruton, Somerset. Proposers: Mr. J. Coates Carter, Mr. John Petter, Mr. Percy F. Warren.
- THOMAS:** **PERCY EDWARD**, O.B.E. [A. 1920], 6 and 7 St. John's Square, Cardiff; Dene Lodge, Cathedral Road, Cardiff. Proposers: Mr. Harry Teather, Mr. Cecil Wilson, Mr. Lennox Robertson.
- TRAYLEN:** **HENRY FRANCIS** [A. 1899], 16 Broad Street, Stamford; 24 St. Martin's, Stamford. Proposers: Mr. J. Alfred Gotch, Sir Reginald Blomfield, Mr. Arthur Keen.
- WALKER:** **JOHN WILSON** [A. 1905], 375 Union Street, Aberdeen; "Kilreen," Stonehaven, Kincardineshire. Proposers: Mr. George Watt and the Council.
- WILSON:** **ROBERT GORDON**, Junr. [A. 1902], 375 Union Street, Aberdeen; 116 Queen's Road, Aberdeen. Proposers: Mr. George Watt and the Council.

AS ASSOCIATES (88).

- ALLEN:** **JOSEPH STANLEY** [Special War Examination], 38 Grange Road West, Birkenhead. Proposers: Professor C. H. Reilly, Mr. T. Taliesin Rees, Mr. Gilbert Fraser.
- ALLISON:** **FREDERICK WILLIAM HARFORTH** [Special War Examination], 11 Lynton Gardens, Harrogate. Proposers: Mr. William H. Thorp, Mr. W. Carby Hall, Mr. H. S. Chorley.
- ALLSFORD:** **ERNEST HAROLD** [Special War Examination], 43 Kingswood Avenue, Brondesbury Park, N.W.6. Proposers: Mr. John Harold Kennard, Mr. Edward Warren, Mr. H. C. Lander.
- BARNARD:** **HAROLD THOMAS BENJAMIN** [Special War Examination], 82 Victoria Street, S.W.1. Proposers: Mr. W. E. Couch, Mr. W. H. Harrison, Mr. Frederick Chatterton.
- BARTLETT:** **PERCY JAMES** [Special War Examination], 3 Mead Way, Sea Mills Park, Bristol. Proposers: Mr. W. H. Watkins, Mr. C. F. W. Denning and the Council.
- BEASLEY:** **ALBERT** [Special War Examination], 1 Sandringham Road, Sneinton, Nottingham. Proposers: Mr. Albert N. Bromley, Mr. Arthur W. Brewill, Mr. A. Ernest Heazell.
- BEAUMONT:** **EUGENE EDWARD** [Special War Examination], 18 Manor Road, Sidcup, Kent. Proposers: Mr. George Ernest Nield, Mr. Clifton R. Davy, Mr. Robert Atkinson.
- BECK:** **HENRY BERKELEY** [Special War Examination], 5 Meyrick Road, Stafford. Proposers: Mr. A. G. Bond and the Council.
- BLOOMFIELD:** **EDWARD HAMILTON** [Special War Examination], 50 Tantallon Road, Balham, S.W. Proposers: Mr. Hamilton Neil, Mr. John Watson, Mr. Wm. B. Whitie.
- BLOOMFIELD:** **HENRY LANCELOT** [Special War Examination], 11 Rothesay Road, Luton. Proposers: Mr. A. G. Bond, Mr. J. J. S. Naylor, Mr. J. E. Dixon-Spain.
- BOWRING:** **JOHN VALENTINE** [Special War Examination], "Woodlands," Eastwood, Leigh-on-Sea, Essex. Proposers: Mr. Herbert Wigglesworth, Mr. David Barclay Niven, Mr. W. E. Vernon Crompton.
- BRANSON:** **PERCY KENNETH** [Special War Examination], 123 St. Saviour's Road, Leicester. Proposers: Mr. Arthur H. Hind, Mr. William M. Cowdell, Mr. Charles Kempson.
- BROOKS:** **LESLIE CLIFFORD** [Special War Examination], 66 Greencroft Gardens, Hampstead, N.W.6. Proposers: Professor A. E. Richardson, Mr. Arthur S. Dixon, Mr. C. E. Bateman.
- BROWN:** **FRANK COLLIN** [Special War Examination], 14 Dartmouth Park Road, N.W.5. Proposers: Mr. R. Allsebrooke Hinds, Mr. John Saxon Snell, Mr. David Barclay Niven.
- BROWN:** **GEORGE TALBOT** [Special War Examination], 51 Fawcett Street, Sunderland. Proposers: Mr. Geo. T. Brown, Mr. W. Milburn, Mr. A. W. S. Cross.
- BUMPSTEAD:** **ALBERT DENNIS**, P.A.S.I. [Special War Examination], 70 Heath Gardens, Twickenham, Middlesex. Proposers: Mr. C. E. Varndell and the Council.
- BURNETT:** **EDGAR** [Special War Examination], Weir House, Hickling, Melton Mowbray. Proposers: Mr. Ernest R. Sutton, Mr. A. Ernest Heazell, Mr. Albert N. Bromley.
- BURNETT:** **FREDERICK WANDLASS**, M.C. [Special War Examination], 23 Windsor Terrace, Penarth, Glam. Proposers: Mr. T. Alwyn Lloyd, Mr. Harry Teather, Mr. Cecil Wilson.
- BYROM:** **RICHARD** [Special War Examination], 221 Tottington Road, Elton, Bury, Lancs. Proposers: Mr. Percy S. Worthington, Mr. Paul Ogden, Mr. A. W. Hennings.
- CARTER:** **WILLIAM** [Special War Examination], 5 Murlton Street, Sunderland. Proposers: Mr. Norman Richley, Mr. F. Willey, Mr. Jos. Spain.
- CHALLICE:** **JOHN** [Special War Examination], 7 Bedford Circus, Exeter. Proposers: Mr. Sydney Tatchell, Mr. Sidney K. Greenslade, Mr. Henry A. Saul.
- CHECKLEY:** **GEORGE** [Special War Examination], 23 Parkbridge Road, Prenton, Cheshire. Proposers: Professor C. H. Reilly, Mr. Gilbert Fraser, Mr. T. F. Shephard.
- CLARK:** **SIDNEY CHARLES** [Special War Examination], 3 Ronald Park Avenue, Westcliff-on-Sea. Proposers: Mr. Melville Seth Ward, Mr. W. H. Harrison, Mr. C. H. Simpson.
- COGSWELL:** **VICTOR GORDON** [Special War Examination], "Sunnicate," London Road, North End, Portsmouth. Proposers: Mr. J. W. Walmsley, Mr. Arthur Stratton, Professor A. E. Richardson.
- COLE:** **ERIC** [Special War Examination], Commerce House, Leckhampton, Cheltenham. Proposers: Mr. L. W. Barnard and the Council.
- COOK:** **HERBERT JAMES** [Special War Examination], School House, Ryhope, Sunderland. Proposers: Mr. F. Willey, Mr. Norman Richley, Mr. W. T. Jones.
- CORDINGLEY:** **REGINALD ANNANDALE** [Special War Examination], 11 Irlam Road, Sale, Cheshire. Proposers: Mr. Percy S. Worthington, Mr. Paul Ogden, Mr. A. W. Hennings.
- COTTON:** **GILBERT HENRY** [Special War Examination], 60 Regent's Park Road, N.W.1. Proposers: Professor A. E. Richardson, Mr. Arthur Stratton, Mr. John Slater.
- COUCHMAN:** **HAROLD WILLIAM** [Special War Examination], Mount Pleasant House, Tottenham, N. Proposers: Mr. Walter R. Jaggard, Mr. J. Campbell Reid and the Council.
- COWTAN:** **ALBERT CHARLES** [Special War Examination], "Elm Way," Eastfields Road, Acton, W.3. Proposers: Mr. E. C. P. Monson, Mr. H. D. Searles-Wood, Mr. Max Clarke.
- CHIEGAN:** **EDGAR WILSON** [Special War Examination], 23A Golders Way, Golders Green, N.W.11. Proposers: Mr. Henry A. Saul, Mr. S. B. Russell, Mr. T. Edwin Cooper.
- DETMOLE:** **FREDERICK GUY** [Special War Examination], 100 Redcliffe Gardens, S.W.10. Proposers: Mr. H. P. G. Maule, Mr. Sydney Tatchell, Mr. Walter Cave.

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- EDWARDS: WILFRID BYTHELL [Special War Examination], Victoria Villa, Flint, N. Wales. Proposers: Professor C. H. Reilly, Mr. T. Taliesin Rees, Mr. Gilbert Fraser.
- FIELDER: GEORGE HAROLD [Special War Examination], 55 Broxholm Road, West Norwood, S.E.27. Proposers: Mr. Arthur Stratton, Professor A. E. Richardson, Mr. W. H. Ward.
- GRANGER: WILLIAM FRASER [Special War Examination], 8 New Square, Lincoln's Inn, W.C.2. Proposers: Mr. Henry Tanner, Mr. E. Vincent Harris, Sir Henry Tanner.
- GREENWOOD: JAMES HENRY [Special War Examination], 13 Water Lane, Brixton Hill, S.W. Proposers: Mr. Arthur E. Bartlett, Mr. Edward A. Hunt, Mr. W. Braxton Sinclair.
- GRIFFITH: HUGH NICHOLAS [Special War Examination], 31 Tithebarn Road, Southport. Proposers: Mr. Richard Hall and the Council.
- GUY: WALDO EMERSON [Special War Examination], The Vicarage, Claverley, Shropshire. Proposers: Mr. Robert Atkinson, Major Harry Barnes, Mr. C. W. F. Wheeler.
- HAIRD: TOM WILLIAM [Special War Examination], 56 Wilberforce Road, Leicester. Proposers: Mr. Arthur H. Hind, Mr. William M. Cowdell, Mr. Charles Kempson.
- HARDING: FRED HAROLD [Special War Examination], 54 Knighton Fields Road, Leicester. Proposers: Mr. William M. Cowdell, Mr. Charles Kempson, Mr. Arthur H. Hind.
- HAUGHAN: JOHN HOLLIDAY [Special War Examination], The Grey House, Silloth, Cumberland. Proposers: Mr. J. Forster, Mr. J. H. Martindale, Mr. J. W. Benwell.
- HEARD: GORDON THOMAS [Special War Examination], Elbro House, Princes Road, Buckhurst Hill, Essex. Proposers: Mr. Wm. E. Watson, Mr. H. Tooley, Mr. Horace White.
- HOLLIDAY: ALBERT CLIFFORD [Special War Examination], 61 Ashton Street, Liverpool. Proposers: Mr. T. Taliesin Rees, Mr. O. D. Black, Mr. Edgar Quiggin.
- HOWELS: DAVID JOHN [Special War Examination], "Bryn Hywel," Clase Road, Morriston, Swansea. Proposers: Sir Charles Ruthen, Mr. Glendinning Moxham, Mr. W. James Nash.
- HUNT: REGINALD [Special War Examination], The Homestead, Sunningwell Road, Oxford. Proposers: Mr. N. W. Harrison and the Council.
- HUNTER: HARRY CORNELIUS [Special War Examination], West View, Hadley Road, New Barnet, Herts. Proposers: Mr. Walter R. Jaggard, Mr. Matthew J. Dawson and the Council.
- JOHNSON: CAMPBELL McALPIN CAMERON [Special War Examination], "Monteith," Stroud Road, Gloucester. Proposers: Mr. Norman Evill, Mr. E. Guy Dawber, Mr. F. W. Walker.
- JONES: REGINALD HERBERT ANDREWS [Special War Examination], 18 Broughton Road, West Ealing, W.13. Proposers: Mr. E. C. P. Monson, Mr. J. Osborne Smith, Mr. Fredk. Osborne Smith.
- JONES: RONALD HUGH [Special War Examination], 3, Groll Avenue, Neath, S. Wales. Proposers: Mr. C. Glynn Evans, Mr. W. James Nash, Mr. Glendinning Moxham.
- JONES: TOM LEONARD [Special War Examination], "Trydail," Alma Street, Newport, Mon. Proposers: Mr. Ernest Newton, Mr. Arthur Keen, Mr. E. C. P. Monson.
- KESSEY: WALTER MONCKTON, M.C., A.R.C.A., A.R.E. [Special War Examination], 44 Rusholme Road, Putney, S.W. Proposers: Mr. Robert Atkinson, Mr. Edwin T. Hall, Mr. E. Stanley Hall.
- KERR: JAMES AUBREY [Special Examination], 35 Morton Street, Wollstonecraft, Sydney, N.S.W. Proposers: Mr. C. E. Varndell, Mr. E. Stanley Hall, Mr. A. H. Moberly.
- KIRBY: EDWARD [Special War Examination], 151 Alexandra Road, Wellingborough, Northants. Proposers: Professor A. E. Richardson, Mr. Arthur Stratton, Mr. James W. Fisher.
- KNOTT: ALBERT LESLIE [Special War Examination], 1 St. Gabriel's Road, Cricklewood, N.W.2. Proposers: Mr. Arthur Stratton, Mr. Horace Gilbert, Mr. C. Stanley Peach.
- LANGDELL: GEORGE ARTHUR [Special War Examination], 23 Westcroft Square, Ravenscourt Park, W.6. Proposers: Mr. Stanley C. Ramsey, Professor S. D. Adshead, Mr. W. H. Seth-Smith.
- LAVENDER: EDWARD PRICE [Special War Examination], Stifford Rectory, Grays, Essex. Proposers: Sir Banister Fletcher, Mr. Ernest G. Allen, Mr. Osborn C. Hills.
- LEATHART: JULIAN RUDOLPH [Special War Examination], 8 New Square, Lincoln's Inn, W.C.2. Proposers: Mr. E. Vincent Harris, Sir Henry Tanner, Mr. Henry Tanner.
- LEWIS: GEORGE STANLEY [Special War Examination], 4 Ninth Avenue, Old Swan, Liverpool. Proposers: Mr. E. Bertram Kirby, Mr. Gilbert Fraser, Mr. T. Taliesin Rees.
- LUKE: REGINALD LATHAM [Special War Examination], 72 Oxford Street, W. Proposers: Professor A. E. Richardson, Mr. Frank T. Verity, Mr. Arthur Stratton.
- MAHON: SIDNEY EDWARD [Special War Examination], 74 Cambridge Road, Great Crosby, Liverpool. Proposers: Professor C. H. Reilly, Mr. Gilbert Fraser, Mr. T. Taliesin Rees.
- MARTIN: NATHANIEL [Special War Examination], Scottish Club, Endsleigh Gardens, Euston Road, W. Proposers: Mr. A. G. Bond and the Council.
- MAUGER: PAUL VICTOR EDISON [Special War Examination], 250A Gloucester Terrace, W.2. Proposers: Mr. T. Alwyn Lloyd, Mr. H. V. Lanchester, Mr. Geoffrey Lucas.
- MILLER: CLAUDE ST. JOHN GARLE [Special War Examination], 88 Bickenhall Mansions, Gloucester Place, W.1. Proposers: Mr. C. E. Varndell, Mr. Robert Atkinson, Mr. E. Stanley Hall.
- MINTY: ROBERT JAMES HUGH [Special War Examination], 35 Craven Street, Charing Cross, W.C.2. Proposers: Professor A. E. Richardson, Mr. Arthur Keen, Mr. W. Curtis Green.
- MITCHELL: EDWARD ARNOLD [Special War Examination], 17 Hanover Square, W.1. Proposers: Mr. E. Guy Dawber, Mr. W. Curtis Green, Sir John J. Burnet.
- NEWTON: PERCY MAURICE [Special War Examination], 10 Berkeley Street, Hull. Proposers: Mr. L. Kitchen, Mr. P. Gaskell, Mr. G. Dudley Harbron.
- NORTON: CHARLES JOSEPH [Special War Examination], 1 Bridge Avenue, Hammermith, W.6. Proposers: Mr. J. Alfred Gotch, Mr. Claude W. Ferrier, Mr. C. E. Varndell.
- OSBALDISTON: GEORGE ALBERT [Special War Examination], "Kalimna," Milton Road, Auchenflower, Brisbane, Australia. Proposers: The Council.
- OWEN: ARTHUR TREVOR [Special War Examination], "Myrtle Bank," Dalmorton Road, New Brighton, Cheshire. Proposers: Mr. T. E. Eccles, Mr. Edgar Quiggin, Mr. Gilbert Fraser.
- PENMAN: EDWARD MEADOWS [Special War Examination], 1 Thorpewood Avenue, Sydenham, S.E.26. Proposers: Mr. Frederick Wheeler, Mr. David Thomson, Mr. C. W. F. Wheeler.
- PRICE: HARRY JAMES PARKIN [Special War Examination], 19 Eastholm, Golders Green, N.W.11. Proposers: Mr. Albert Howell, Mr. Charles Spooner, Mr. George Elkington.
- PRICHARD: LIONEL ARTHUR GEORGE [Special War Examination], 17 Sixth Avenue, Old Swan, Liverpool. Proposers: Mr. T. Taliesin Rees, Mr. O. D. Black, Mr. E. Bertram Kirby.
- REES: VERNER OWEN [Special War Examination], 32 Bland-

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- ford Road, Bedford Park, W.4. Proposers: Mr. James S. Gibson, Mr. P. Morley Horder, Mr. Robert Atkinson.
- REYITT: GEORGE [Special War Examination], County Offices, St. Mary's Gate, Derby. Proposers: Mr. George H. Widdows and the Council.
- RIDGE: THOMAS [Special War Examination], Bank Chambers, Oswestry. Proposers: Mr. Aylwin O. Cave, Mr. Francis Jones, Mr. Percy S. Worthington.
- RIPPINGHAM: THOMAS FRANCIS [Special War Examination], 42 Upper Manor Street, Chelsea, S.W. Proposers: Mr. A. Hill Parker, Mr. R. J. Allison, Mr. W. Bevan.
- SCRIVEN: CHARLES [Special War Examination], 51A Alexandra Road, South Hampstead, N.W.8. Proposers: Mr. Robert Atkinson, Mr. Ernest Newton, Mr. Arthur Keen.
- SMITH: ALFRED EWART [Special War Examination], 48 Tyn-dale Street, Leicester. Proposers: Mr. Arthur H. Hind, Mr. William M. Cowdell, Mr. Charles Kempson.
- SMITH: CECIL [Special War Examination], 17 Winchester Avenue, Brondesbury, N.W.6. Proposers: Mr. Robert Atkinson, Mr. C. E. Vardell, Mr. H. R. Goodtham.
- STURGEON: JOHN HENRY [Special War Examination], 13 Chesham Terrace, King's Cliff, Brighton. Proposers: Mr. Robert Atkinson, Mr. Edwin T. Hall, Mr. E. Stanley Hall.
- SUTCLIFFE: THOMAS WILFRID [Special War Examination], 22 Edmund Street, Rochdale, Lancs. Proposers: The Council.
- THORBUEN: RICHARD [Special War Examination], 200 Ports-down Road, Maida Vale, W.9. Proposers: The Council.
- TRIMM: CHARLES ALGERNON, M.C. [Special War Examination], "Firtor," 22 Lower King's Road, Kingston-upon-Thames. Proposers: Mr. W. J. Kemp, Mr. W. Murthwait How, Mr. A. G. Bond.
- WALKER: REGINALD BECKWICK [Special War Examination], 28 Chichele Road, Cricklewood, N.W.2. Proposers: Professor S. D. Adshead, Professor A. E. Richardson, Mr. Stanley C. Ramsey.
- WHITE: CHARLES STANLEY [Special War Examination], 34 Bedford Square, W.C.1. Proposers: Mr. Robert Atkinson, Mr. Edwin T. Hall, Mr. E. Stanley Hall.
- WILLIAMS: EDWIN [Special War Examination], 201 Edge Lane, Liverpool. Proposers: Professor C. H. Reilly, Mr. Gilbert Fraser, Mr. W. E. Willink.
- WILLIAMS: HOWARD [Special War Examination], "Cartref," 37, Kimberley Road, Roath Park, Cardiff. Proposers: Mr. T. Alwyn Lloyd, Mr. Harry Teather, Mr. George E. Halliday.
- WINN: THOMAS JOHN ROSEWARNE [Special War Examination], Trevone, Truro, Cornwall. Proposers: Mr. Martin S. Briggs, Mr. Arthur Stratton, Professor A. E. Richardson.

Members' Column

Members, Licentiates, and Students may insert announcements and make known their requirements in this column without charge. Communications must be addressed to the Editor, and be accompanied by the full name and address. Where anonymity is desired, box numbers will be given and answers forwarded.

WELWYN GARDEN CITY.

ASSISTANT ARCHITECT wanted; experienced in building practice and inspection; good business, practical and technical knowledge essential. Good post for a thoroughly capable man.—Write, stating qualifications in full, age, etc., to Architect, Welwyn Garden City, Herts.

OFFICE ACCOMMODATION WANTED.

FELLOW R.I.B.A. wishes to share offices in convenient position, London, West End preferable.—Box No. 284, c/o Secretary, R.I.B.A., 9, Conduit Street, W.

PARTNERSHIP.

ASSOCIATE (20) wishes to purchase partnership in established London firm. Practised for 24 years, Contracts amounting to £35,000, mostly buildings of the factory class. Good connection and prospects of immediate work.—Write Box No. 2712, c/o Secretary, R.I.B.A., 9, Conduit Street, W.1.

ARCHITECT requires Partner in country practice; "A.R.I.B.A. preferred.—Apply Box 6212, c/o Secretary R.I.B.A.

ASSOCIATE, age 43, fully qualified in all branches, including quantities, wishes to purchase share of established provincial practice. Is accustomed to taking full control.—Box 8222, c/o Secretary R.I.B.A., 9, Conduit Street, W.

APPOINTMENTS WANTED.

A.R.I.B.A., B.Arch. (1st class Honours) Manchester, Captain (M.C., 4 mentions), 4 years in France and Italy. (27.) Go anywhere, home or abroad, where keen, competent and willing work is required. Travelled over nearly all Europe; 3 languages. Last position, Lecturer in Architecture, Technical College, Salford. Will tackle any job, architectural or otherwise.

ASSOCIATE 1907. Training and experience with well known London architects. All-round experience, including quantities. Own practice has included Banks, Churches, Schools, Houses. Open for engagement or with view partnership.—Box 3112, c/o Secretary, R.I.B.A., 9, Conduit Street, W.1.

LICENTIATE R.I.B.A., with over 20 years' varied experience, desires responsible post. Plans, quantities, measuring up, supervision of work or office. War service in France and Russia.—Box 277, c/o Secretary, R.I.B.A., 9, Conduit Street, W.1.

PROBATIONER R.I.B.A., age 22, recently completed Articles, seeks appointment as Improver. Good draughtsman, experience on large housing scheme, and general work. Ex-Service man.—Box 4112, c/o Secretary R.I.B.A., 9 Conduit Street, London, W.1.

A.R.I.B.A. (36), ex-officer, has had good experience—Articles and about 9 years—with London firms, offers services, temporary or otherwise. Good experience in making working details; some experience also in supervision of works.—Address Box 3222, c/o Secretary R.I.B.A., 9 Conduit Street, London, W.1.

Minutes IX

At the Seventh General Meeting (Ordinary) of the Session 1921-1922, held on Monday, 6 February 1922, at 8.30 p.m. Present: Mr. Paul Waterhouse, President, in the chair. The attendance book was signed by 28 Fellows (including 8 Members of the Council), 40 Associates (including 2 Members of the Council), 4 Licentiates, and a large number of visitors. The Minutes of the Meeting held on 23 January 1922, having been published in the JOURNAL, were taken as read and signed as correct.

The Secretary announced that the Council had nominated for election to the various classes of membership the gentlemen whose names were published in the JOURNALS for 22 October 1921, 26 November 1921, and 14 January 1922.

The Secretary announced that the Council proposed to submit to His Majesty the King the name of Mr. Thomas Hastings, of New York, as a fit recipient of the Royal Gold Medal for Architecture for the current year.

The Hon. Secretary announced the decease of Mr. Ernest Newton, C.B.E., R.A., President 1914-1917, Royal Gold Medallist 1918, Officier de l'Ordre de la Couronne (Belgium), Hon. Membre de la Société Centrale d'Architecture de Belgique, Officier d'Académie de France, Membre Correspondant de la Société des Architectes diplômés par le Gouvernement, and referred to his eminent services to the Royal Institute and the profession and to his remarkable personal qualities. The President alluded to the great loss which the profession had suffered in Mr. Newton's untimely death. The Hon. Secretary also announced the decease of Mr. Henri Favarger, F.S.A. [F.], elected 1901, and it was RESOLVED that the regrets of the Royal Institute for their loss be entered on the Minutes and that a

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message of sympathy and condolence be conveyed to the relatives of these two deceased Members.

Messrs. Stanley Hunt, B. H. Jackson, K. H. Read and B. R. Saunders, Associates, attending for the first time since their election, were formally admitted by the President.

The President, having delivered the Annual Address to Students, a vote of thanks was passed to him by acclamation on the motion of the Vice-Chancellor of the University of Cambridge, the Rev. E. C. Pearce, D.D., seconded by Mr. Edward P. Warren [F.]. The President having responded, Mr. D. Theodore Fyfe [F.] read a *Review of the Works submitted for the Prizes and Studentships 1922*. On the motion of the President, a vote of thanks was passed to Mr. D. Theodore Fyfe by acclamation.

The Presentation of Prizes was then made as follows, in accordance with the Deed of Award:—

Certificate of Hon. Mention to Mr. Herbert J. Harding, A.R.C.A., for his Essay on "The Imaginary Architecture of Literature," submitted in Competition for the Essay Prize under the motto "Panis Ferox."

The Soane Medallion to Mr. Alfred John Brown, for his design for a Central Group of Buildings for a Modern non-Residential University, submitted under the motto "Per Angusta."

A Certificate of Hon. Mention to Mr. Thomas E. Scott, A.R.I.B.A., for his design submitted under the motto "B. Minor."

The Owen Jones Studentship Certificate to Mr. W. J. Knight, A.R.I.B.A.

A Certificate of Hon. Mention and cheque £5 to Lieut. K. H. Read, A.R.I.B.A., for his design for an Asylum for 200 Aged and Infirm Poor, submitted in Competition for the Henry Saxon Snell Prize under the device "Grenade."

The books selected by Mr. L. W. Ingham, A.R.I.B.A., of Dublin, Ashpitel Prizeman 1921, were laid on the table.

Mr. Ingham had written regretting his inability to be present.

The proceedings closed at 9.40 p.m.

Minutes X

SESSION 1921-1922.

At a Special General Meeting summoned by the Council under By-Law 65, on the receipt of a requisition signed by the proper number of members and held on Tuesday, 7 February 1922, at 5.30 p.m., Mr. Paul Waterhouse, President, in the chair. The attendance book was signed by 62 Fellows (including 14 Members of the Council), 136 Associates (including 3 Members of the Council). The Minutes of the Special General Meeting held on 22 December 1921 were taken as read and signed as correct. The following Resolution was moved by Mr. A. W. S. Cross [F.], Vice-President, and seconded by Mr. George Hubbard [F.] :

"That this Meeting is of opinion that the conditions for the Unification of the profession should form part of a Registration Bill, and that the present system of admittance to the Institute, including compulsory examination, should continue in force until a Registration Bill be passed."

The following amendment was moved by Mr. H. T. Buckland [F.] and seconded by Mr. Herbert A. Welch [A.] :

"That in view of the fact that a Committee which represents all sections of the profession has been appointed to consider and report upon all questions connected with the Unification and Registration of Architects, this meeting deprecates the public discussion of various views until the report of the Committee has been presented, and considers that all suggestions and proposals for carrying out the expressed wishes of the profession should be sent to the Unification and Registration Committee for consideration."

The Hon. Secretary read the following resolution passed the same afternoon by the Unification and Registration Committee:

"That this meeting of the Unification and Registration Committee re-affirms its Resolution of 12 May 1921, that the principle of Scheme A, namely, the brining of all Architects of the United Kingdom into membership of the R.I.B.A. be adopted as the basis of Unification," and the following resolutions submitted by the Associates' Committee:

"That in the opinion of the Associates' Committee, if the resolution on the Agenda Paper at the Special General Meeting called for Tuesday next, 7 February, is carried, the Unification of the profession will be indefinitely postponed."

The Committee has ample evidence that, although there are differences of opinion as to details, the great majority of Associates are in favour of "Unification" whether or not Registration is immediately obtained.

LIVERPOOL.

Resolution passed at Meeting of Associates in Liverpool, October 1921:

"That this meeting of Associates of the Royal Institute of British Architects resident in Liverpool and District is agreed that Unification is an indispensable prerequisite to Registration by Act of Parliament and would urge that every effort be made to secure the Unification of the profession."

MANCHESTER.

Resolution passed at Meeting of Associates held in Manchester, October 1921.

"This meeting, having considered the point of view expressed by certain members who are opposing the scheme, namely, 'that if registration by Act of Parliament does not materialise for some time the present suggestion of Unification is a false step,' is agreed that Unification, apart from any details at present proposed, is an essential preliminary, and is prepared to support the same from the advantages which it would bring."

NEWCASTLE.

Resolution passed at Meeting of Associates held in Newcastle, November 1921.

"That his meeting of Associates of the Royal Institute of British Architects resident in Newcastle and District is agreed that Unification is an indispensable prerequisite to Registration by Act of Parliament and would urge that every effort be made to secure the Unification of the profession."

In the discussion which ensued, the following members took part:

Wm. Woodward [F.]
Sydney Perks [F.]
W. Henry White [F.]
Gilbert Fraser [F.] (Liverpool)
G. C. Lawrence [A.] (Bristol)
C. B. Flockton [F.] (Sheffield)
A. W. Hennings [F.] (Manchester)
C. W. Long [F.]
Sir Banister Fletcher [F.]
Edward Warren [F.]
F. R. Hiorns [F.]
M. Thompson [A.]
P. M. Fraser [F.]
Baxter Greig [A.]

On being put to the vote the amendment was lost by 118 votes to 80.

The Resolution was then put and 112 members voted in favour and 66 against.

The Resolution, not having secured the necessary two-thirds majority, was lost.

The proceedings terminated at 7.30 p.m.



PROPOSED SCHEME FOR FIRST CLASS GARDEN LOUNGE—STARBOARD—S.S. LACONIA

Architects—Mewes and Davis

The Decoration of Ocean Liners

Read before the Royal Institute of British Architects, Monday, 20 February 1922

By ARTHUR J. DAVIS [F.]

MR. CHAIRMAN, LADIES AND GENTLEMEN,—I am very much honoured by the invitation that the Royal Institute of British Architects have extended to me to read a Paper to-night on "The Decoration and Equipment of the Ocean Liner." This subject covers such a large field, and its ramifications are so numerous, that I fear that in the short time at my disposal it would be impossible to deal adequately with all its details. I propose, therefore, to confine myself to broad principles, and shall, perforce, have to omit the discussion of many interesting side issues.

It is not within the province of this Paper to deal with the decoration of the sailing ship.

Volumes could be written on this subject, which covers a period almost equal to that of the history of the human race.

To mention only the ships of the seventeenth and eighteenth centuries, on which some beautiful work of the carver, painter, and gilder can be found, opens up a delightful vista which must, however, be reluctantly closed.

A visit to the Maritime Museum of the Louvre and to Greenwich Hospital will show what has been achieved in this direction; but we must leave this fascinating subject and pass on to the beginning of the nineteenth century, when steam was first introduced in navigation, and the *Charlotte Dundas*, constructed by Symington, was launched on the Forth and Clyde canal.

"She carried an engine, designed by the great James Watt, which drove a stern wheel. Her suc-

cess inspired the American engineer, Robert Fulton, to build the *Clermont*, in New York, five years later. This vessel, also engined by Watt, travelled up the Hudson River from New York to Albany, performing the journey of 130 miles in thirty-two hours. We are told that an enormous and, on the whole, sceptical crowd gathered to witness the commencement of what was to prove a classical voyage. According to an account written in the *New York Evening Sun*, the *Clermont* 'moved out into the stream, the steam connection hissing at the joints, the crude machinery thumping and groaning, the wheels splashing and the smoke-stack belching like a volcano,' while 'one honest countryman, after beholding the unaccountable object from the shore, ran home and told his wife that he had seen the devil on his way to Albany in a saw mill.' Others described her as a 'monster moving on the water, defying the waves and the tide, and breathing flames and smoke.' "

That was in the year 1807, but it was not until 24 May 1819, the day on which Queen Victoria was born at Kensington Palace, when the *Savannah*, a wooden sailing ship fitted with an auxiliary steam engine, quitted the port which bears her name, and a fortnight later steamed slowly up the Mersey to the astonishment of a large crowd of spectators, that the Atlantic steamer service may be said to have received its effective initial impulse.

Nothing, perhaps, has contributed more largely than this to the maintenance of cordial relations between the members of the Anglo-Saxon race in the

old and new worlds and to the extraordinary developments which have since been effected in trans-Atlantic travel.

Our great-grandfathers seemed to have scarcely realised the consummate importance of the new departure.

The *Britannia*, the pioneer vessel of the Cunard fleet, measured 207 feet long by 34 feet broad and 22 feet deep, with a tonnage burden of 1,154 and an indicated horse-power of 740. Her cargo capacity was 225 tons, and she was fitted for the accommodation of 115 cabin passengers, but had no steerage. Her average speed was $8\frac{1}{2}$ knots per hour on a coal consumption of 38 tons per day.

In her passenger list, eighteen months after her maiden voyage, we find the name of Charles Dickens, and in an account of his crossing he writes:—

"I had been led by certain highly-coloured illustrations to anticipate a saloon 'furnished in a style of more than Eastern splendour, filled (but not inconveniently so) with groups of ladies and gentlemen in the very highest state of enjoyment and vivacity,' but I was terribly disappointed with the reality, which I can only compare to 'a gigantic hearse with windows in the side.'"

One can easily imagine what would have been the surprise of "Boz" at the appearance of a modern ship with its wireless telegraphy, electric light, gymnasium, swimming bath, and even a journal such as the *Cunard Bulletin* printed and published during the voyage.

This development has taken the form of a geometric progression, but it is only within the last twenty years that one can say that the ocean liner, as we know her to-day, with all her wonderful display of technical and artistic equipment, has reached her present state of perfection.

It is difficult to appreciate the full debt which the science and art of shipbuilding owe to the individual enterprise of such men as Samuel Cunard, William Inman, Thomas Ismay and Alexander Allan.

It was Thomas Ismay who realised in the year 1875 that the old tradition of placing passengers aft made for acute discomfort with the arrival of the screw propeller, and he decided to put his passenger quarters forward of the engine rooms, where the vibration and movement of the vessel were least noticeable. The saloons and staterooms were placed amidships, and the former were constructed to

occupy the whole width of the vessel, being superior in ventilation and lighting to any yet in existence.

It was in the spring of 1913 that the *Aquitania*, at once the latest and the greatest of marine wonders, glided from her berth into the same waters which, little more than a century ago, witnessed the first feeble efforts of Bell's *Comet*. It is almost impossible to conjure up to-day a vision of this tiny vessel of 1812 by the side of the colossus of 1914, with accommodation for 3,250 passengers, together with a crew of 1,000; a floating population larger than that of a great many English borough towns.

Of the White Star liner *Olympic* it has been said that she is not so much a ship as a palatial floating hotel, with every luxury that modern art in decoration and furnishing can provide; indeed, the simile of the floating hotel is somewhat inadequate; the term "Floating Town" more precisely meets the comprehensive idea of her construction.

Think of all the historic ships which you have ever heard of, from the time of Columbus's *Santa Maria*, Grenville's *Revenge*, Nelson's *Victory*, even through that interesting maritime period of the old East Indiamen and the clipper-ship. Consider, if you will, the whole category of epoch-making steamships, from the time that Papin discovered steam power; consider Fulton's *Clermont*, the Clyde-built *Comet*, the famous *Great Eastern*, down to the *Mauretania* and the *Majestic*, and then you can readily realise the continuous advance that has been made in the construction and equipment of that modern marvel "the transatlantic liner."

These colossal vessels have caused shipyards and piers to undergo considerable enlargement, and harbours to be deeply dredged.

An inspection of the interior of the *Olympic* means a walk of no less than nine miles. It is more than a third of a mile round her deck, and from waterline to bridge she is about as high as a six-storey building. She has eleven steel decks, seven of which are used by passengers. The two sets of reciprocating engines, each driving a wing shaft, whilst the middle screw is driven by a turbine, are the largest ever built.

Each of the funnels is wide enough to take two railway trains running abreast, and they rise 81 feet above the deck.

This rapid development has brought about a complete revolution in the methods employed both as regards the internal planning and the equipment of these ships. With the inevitable necessity of

specialising in many new directions, it has become the practice to employ experts to advise upon the various requirements of the modern liner, and not only does this apply to the actual planning of the habitable portion of the ship, but also to her decoration, furniture, electric light, heating, ventilation and lift installations. As the natural sequence of this evolution, so far as the purely non-nautical construction is concerned, it was found that the ship designers could no longer deal adequately with the large areas and surfaces to be planned. The space for the important public rooms was so vast, and the height of these rooms so great, that the expert knowledge of the architect was necessary to deal with the arrangements of these available spaces.

As an experiment the architect was first introduced chiefly as an art adviser, and it was considered that his duties should be confined within the limits of decoration and furniture. Having justified his appointment, he gradually encroached on other portions of the ship, and it has now been found advisable to bring him into contact with the ship-architect at the very early stages of the design. As I have heard it put rather appropriately, the ship is now in the hands of the wet and the dry architects. All the parts of her construction affecting her main lines, the great sweep of her bows, the laying of her keel, her superstructure and her navigating qualities, are naturally in the hands of the "wet" architect, whereas the "dry" architect is called in and consulted when it comes to planning her inside and finishing her public rooms and cabins.

I may safely say that members of our profession have now become a virtual necessity in the completion of all large ships; not only are they employed in an advisory capacity, but it is usual for them to create and prepare the designs and supervise the contracts, as well as control the general decorative fitting up of the vessel in a similar manner to that adopted in all large buildings. The method pursued by the great shipping companies is roughly as follows.

After they have decided upon the size, tonnage, and carrying capacity of the ship they intend to build, they invite tenders from the various ship-building yards. The contract having been agreed upon, and the builders having been appointed, the architect is next consulted. At this stage the position of the bulkheads, funnel casing, expansion joints, cargo hatches, etc., are virtually settled; but the spaces remaining still available for the planning

of the principal public rooms, staircases, elevators, staterooms, and service offices have to be dealt with. Here is where the architect begins his work. It must, however, be clearly understood that he is only called in to work out the interior scheme of the vessel in collaboration with the ship-designer, to whose knowledge of the laws governing marine construction he must necessarily defer.

All the features with which we have long been familiar in our great hotels and public buildings are at the disposal of the architect in the planning and decorative equipment of the modern liner. So numerous are the rooms, so great the area, and so increased the available height that it has now not only become possible but necessary to employ the recognised rules of architectural planning.

The problems which arise after the construction of the vessel has been finally settled by the ship-designer are, indeed, in many ways so precisely similar to those requiring solution on land that in some cases it has been found advantageous to employ quantity surveyors to take out quantities and measure up variations in exactly the same way as it is done on a land building. Again this experiment has proved successful, and the general tendency is to bring in more and more the technical adviser, and we may see in the future sanitary and electrical experts dealing with their special trades under the control of the architect in the manner familiar to us in our own buildings.

For those architects who have not yet had any experience of ship decoration, and who may feel nervous when first faced with the problem of dealing with a large modern liner, I would suggest, first of all, that their principal friend and adviser, who at the same time may occasionally be their sternest critic, is the ship-architect. Many suggestions that they may make will be turned down by him as being unpractical on the sea, but others may be received with approval. I have found that in many cases our land methods of planning have not yet reached the shipbuilders' yard. It is obvious that the very rapid growth of these great ships has brought about such extraordinary changes that many precautions that it was found necessary to take in vessels of smaller tonnage can now be discarded in favour of systems which we daily apply in the planning of our buildings.

It must be borne in mind that the displacement of our modern ships has recently been increased approximately from 15,000 to 50,000 tons. These

figures are in themselves a proof that many arrangements which were useful and even necessary in the past to cope with the requirements of a vessel half-submerged are altogether out of place on a mighty liner of a length of over 900 feet, a width of 97 feet, and with its upper decks towering some 60 feet above the water level.

Here, perhaps, an example may not be out of place. In the public rooms of small vessels light and air are obtainable solely through the circular ports, which can only be manipulated by persons in authority, and which in stormy weather are hermetically sealed. As a consequence, that peculiar atmosphere is created in which the odours of oil, stale cooking, and general stuffiness all combine with the incessant vibration to impress persons of delicate susceptibility that the pleasures of ocean travel are by no means always equal to the stationary comforts of dry land. In the past conditions such as these have deterred many from undertaking long journeys by sea. All this has been entirely altered on the great liner. The port-holes have vanished from the upper decks, and have been replaced by large sash and casement windows, operated with ease by either passenger or steward. Nor is this all; when these windows are shut, the natural air is replaced by an efficient and complete scheme of artificial ventilation, a supply of air at any desired temperature being forced to every part of the ship.

Again, the immense addition to the tonnage of modern ships, although it has involved an increase in the size of the engines, coal bunkers, cargo and funnel hatches, etc., has not done so in a ratio proportionate to the addition of extra space available for the public rooms, the extent of which has been thus greatly increased. For instance, it is now possible to obtain long vistas through complete suites planned in the grand manner, even monumental and picturesque architectural effects being thus rendered possible.

It may not be uninteresting to give a short list of the public rooms required for the first-class accommodation of an Atlantic liner such as the *Beringaria*, *Majestic*, or the *Aquitania*, each of which has eight floors or decks, communicating with one another by elevators, as well as several staircases. On the lower decks, in addition to the many staterooms, cabins, kitchens, and service rooms, etc., we find the great dining saloon (capable of seating from 500 to 600 persons), with an adjoining grill-room, foyer, and lounge, a large swimming bath and gymnasium,

Turkish and electric baths, and purser's office, etc. Above, on the upper decks, in addition to the main staircase and several lifts, we find the ladies' drawing room and writing room, a hall, lounge, and ball-room, the veranda café, smoking room, exhibition gallery, barber's shop, book and flower stalls, while on the converted German liners a restaurant and winter garden were features of considerable prominence.

The second-class accommodation, which is, perhaps, hardly less luxurious than that of the first, is also placed under the control of the architect. It has been recognised that every class of passenger expects to be provided with all the latest improvements, and while before the war competition among the various shipping companies was so keen, it was obvious that neither expense nor trouble could be spared to provide every comfort to all classes on board. Not only are new suggestions constantly elaborated, but everybody interested in the success of a new ship is encouraged to bring forward any fresh solution to the many problems, which vary with every vessel launched.

The once familiar "cabin" has no longer a place in the vocabulary of the great shipping companies. The term stateroom has a dignified sound more appropriate to these luxurious rooms. Frequently arranged in suites containing a sitting room, bedroom, and bathroom, with the addition sometimes of a private dining room, these apartments are the last word in comfort and refinement. In the bedrooms, double or single beds, made of some rare wood, oxidized silver, or brass, replace the old awkward bunks placed one above the other. Finely veneered woods, panelled and delicately tinted walls, light washable materials for curtains and furniture coverings, and decorations free from all unnecessary elaboration, are as much the special feature of these rooms as the wardrobes, fittings and cupboards, which are replete with every possible convenience.

The artificially ventilated inside cabin, so often and so rightly objected to, is gradually disappearing, and ingenious arrangements are now contrived to enable even the innermost staterooms to receive fresh air and light, thus considerably enhancing their letting value.

All the fittings of these cabins are especially thought out and constructed for practical utility, the style of decoration selected for the room being maintained throughout.

Methods of design, appropriate when used in con-



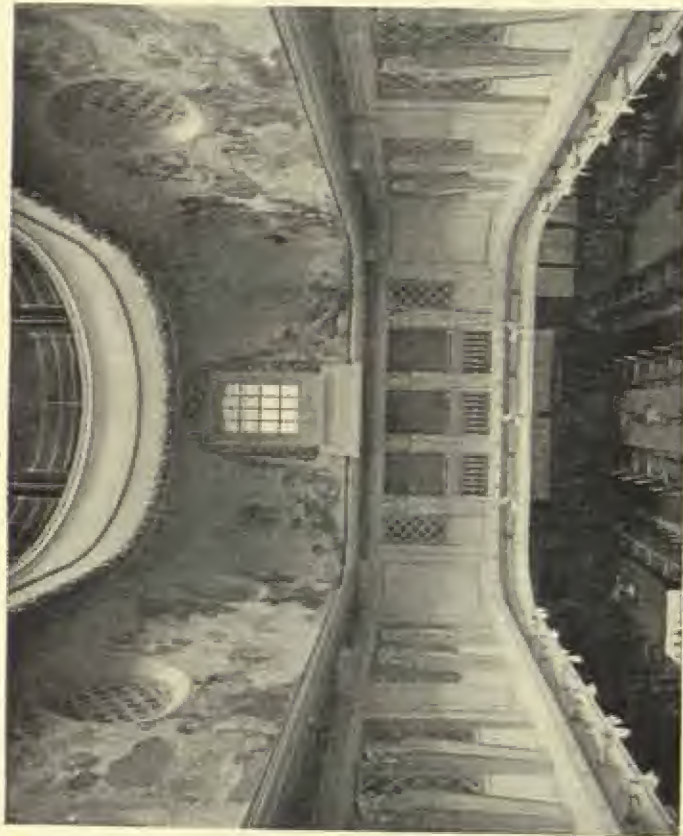
S.S. EMPRESS OF ASIA—LOUNGE

Architect—George A. Crawley

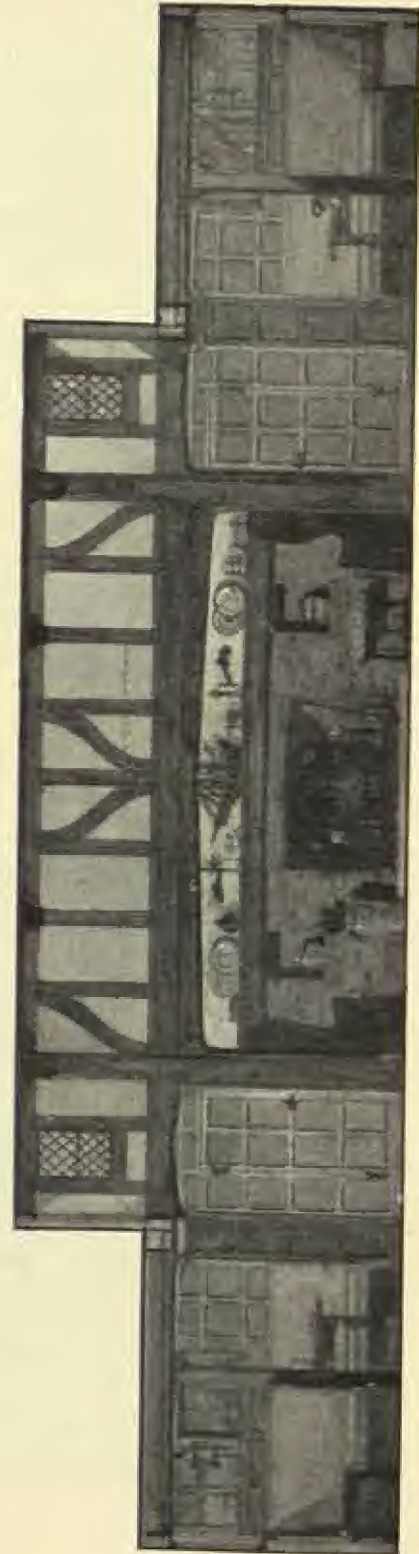


S.S. EMPRESS OF ASIA—LIBRARY

Architect—George A. Crawley

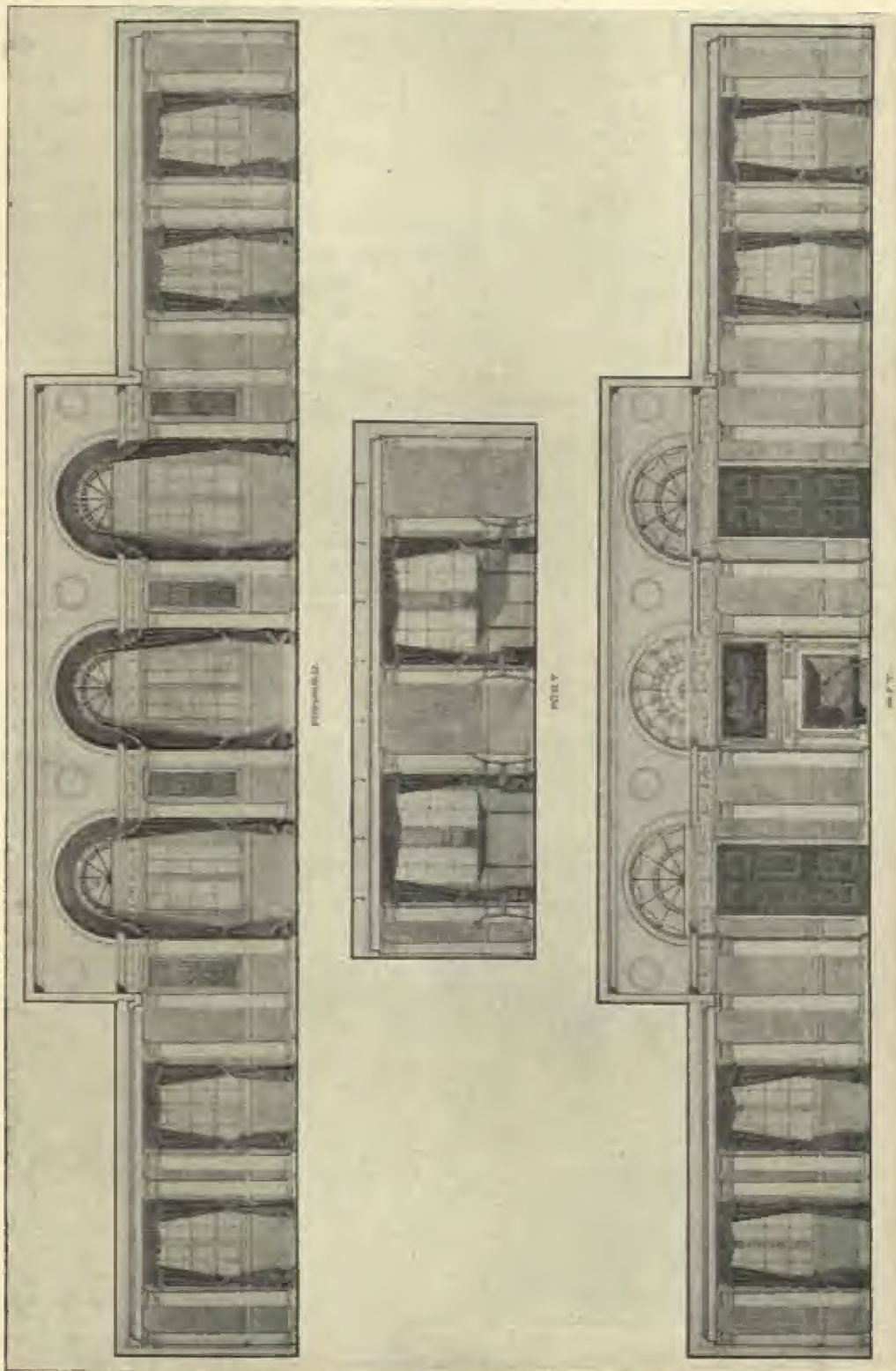


P. & O. S. N. S. S. NARUNDA—FIRST SALOON DOME



PROPOSED SCHEME FOR FIRST CLASS SMOKING ROOM—S.S. LACONIA. FORWARD ELEVATION

Architects—Mewes and Davis



PROPOSED SCHOOL FOR FIRST CLASS WRITING ROOM—S.S. LACONIA

Architects—Mewes and Davis



S.S. AQUITANIA—ENTRANCE

Architects—Mewes and Davis



S.S. AQUITANIA—FIRST SALOON

Architects—Mewes and Davis

nection with buildings, cannot be transposed without change and adaptation to the requirements of sea-going vessels. The architect who does not modify his designs to suit these special requirements will be seriously disappointed when he comes to view the result. The pitfalls to be avoided are legion, and many schemes which look very well on paper may prove to be failures when put into execution. Decorations, for instance, should not be designed without full consideration being given to the sheer and camber, which in certain portions of a ship are considerable. It is occasionally noticeable that inexperienced decorators arrange the cornices of a large room to follow the "camber" of the underside of the deck line above, while overdoors, window bars, and dado mouldings are arranged horizontally. The effect thus produced is extremely unpleasant, and far more noticeable in execution than on the drawings.

Another temptation to be avoided is to overcrowd a room with heavy ornament and meretricious decoration. This fault was very apparent on some of the earlier German liners, where refinement of detail was often sacrificed to tawdry magnificence and over-elaboration.

It must be remembered that on a ship a number of people are imprisoned together for days, and sometimes weeks, that they are forced to live a life altogether different from that to which they are accustomed on land, and that they are frequently compelled to look to the ship herself to provide them with interest and entertainment during an often tedious voyage. It is the duty of the architect to provide suitable surroundings combining an air of comfort and repose in the appearance of the different rooms, which, it may be added, are often of necessity seen under unpleasant conditions.

Again, the factor of relative scale is of paramount importance. It is a well-recognised axiom that no matter how large the rooms to be dealt with on a ship may be, somehow the scale appears much smaller than that of a room of similar dimensions on land. The probable explanation of this is that the absence of heavy constructional piers, deep window and door recesses, etc., tends to diminish the monumental character. Hence heavy or incongruous ornament looks doubly out of place when applied to the comparatively light construction of a ship.

Although the average life of a great liner may be assumed to be only about fifteen years, all the material and workmanship used in the construction

must be of the very finest quality. Of late a great number of experiments have been made with new materials. Many of these have stood with remarkable success the severe tests to which they have been subjected, and there seems to be no limit to future possibilities in this direction. It may be worth mentioning that there has been some prejudice, especially among foreign companies, against the employment of plaster ceilings, but in ships such as the *Mauretania*, *Laconia*, *Alsatian* and *Olympic*, where such ceilings have been tested, they have been entirely satisfactory. To specify plaster and carton pierre for ceilings, domes, coves and cornices may be safely recommended.

Other decorative materials—such as stucco, tiles, mosaic, scagliola and trellis—may also be used with discretion; but marble and brickwork should be avoided on account of their weight, not only in appearance, but in fact. It must always be borne in mind that the marine designer is obliged to give special consideration to this question, particularly on the upper decks. It is unfair, therefore, to handicap him with heavy or bulky materials, which may easily necessitate revision of calculations and involve an increase in the strength of the supporting structure.

Vibration at sea is also an extremely serious question in fast-going vessels, and materials which are likely to scale off or crack should be avoided. The architect must never forget that a ship is designed primarily to be in motion, and, further, that a vessel not merely moves forward, but is subject to lateral roll and a countless number of other strains. This applies not only to the vessel herself and every object she carries, but also to her human freight. The two principal movements are pitching and rolling, and although the latter has been minimised on vessels of recent construction, where such innovations as anti-rolling tanks have been installed, these movements are still felt to a considerable extent in bad weather. As the horizontal section through the centre of the hull of a ship much resembles the shape of an elongated cigar, the pitch or plunging movement is naturally less noticeable than the lateral roll. It is wise, therefore, to design all the swimming tanks and baths so that their length is parallel to the long axis of the vessel, the movement of the water they contain trying to regain its own level being thus minimised. The same remark applies equally to the planning of staircases and companion-ways, which are easier to

negotiate in bad weather when the direction is fore and aft, or, in other words, parallel to that in which the ship is moving. In these staircases, which should be substantially balustraded, and not too wide, it is advisable to avoid winders, as well as awkward turns. Easy flights with comfortable landings are virtually essential.

In a room where comfort is above all things desirable, in my opinion it is advisable to avoid the exaggerated use of skylights and glass domes. With the exception of vestibules, galleries and staircases, all reception rooms, wherever possible, should be lighted laterally. The principal objection to the use of skylights on a ship is that they are awkward to construct and difficult to keep air and watertight; they are not only liable to suffer from vibration, but they produce condensation, and wherever unstained glass is used a cold green light is reflected from the sea into the rooms.

However disguised a skylight may be with stained glass, gilding or other decoration, it always gives an appearance of the room being lighted from an open court.

It is impossible to over-emphasise the fact that conditions at sea are often very unpleasant, and that passengers, after braving the elements on the exposed decks, or sitting for hours on the promenade gazing at a far remote horizon, are only too glad to return to a cheerful room with comfortable surroundings, and for a time at least forget they are at sea. This remark will explain the desirability of introducing suitable fireplaces wherever possible, even though they only supplement the heating installation.

The standard material used for painted woodwork on board a modern liner is well-seasoned Honduras mahogany; but Cuban mahogany, teak, oak, satinwood, walnut, black bean, and many other varieties of hardwoods are often used for decorative purposes. Deal and pine are too soft, and should be avoided. All panelling should be screwed invisibly to horizontal and vertical grounds, which have in turn been fixed to the steel framing of the ship, care being taken that everywhere thick felt is inserted in the positions where the panelling is screwed to the backing, so as to avoid the creaking and groaning produced by the straining of the vessel.

Not only must provision be made for suitable casings for water pipes, ventilation ducts, electric wires, cables, and fire appliances, but the intakes and outlets for ventilation must be duly considered

in connection with the decorative schemes. Here it is often advisable to make certain sections of the cornices in hardwood, so that they may be easily unscrewed to enable the engineers to examine the wires and pipes concealed behind them.

The floors, which are for the most part covered with a thick cork carpet over a layer of magnesite composition, are not infrequently laid with wood parquetry fixed to creosoted fillets. The principal rooms and cabins are partially covered with fine rugs and carpets, and the vestibules, gangways, and stairs by a non-slip rubber tiling or cork carpet.

With regard to general decoration, it is of course impossible to lay down any golden rule as to what style or styles are the most suitable for a liner. Of recent years several attempts have been made to decorate all the rooms in the vogue of one particular period; but, although by no means unsuccessful, such treatment tends rather to monotony, and a variety is, therefore, more generally preferable.

Perhaps the best examples of Jacobean, Restoration, Georgian, Regence, Louis XV., Louis XVI., Adam, and Empire, if simply treated, are amongst the most suitable. But in these days, when we find ships which have been successfully decorated in nearly every style known to art, from Early Persian to Neo-Grec, an architect need never be at a loss to find a suitable period within which he can give a successful expression to his ideas.

In the old liners the motion at sea was so considerable that every article of furniture had to be permanently screwed to the floors. The chairs were nearly always of the heavy inconvenient pattern revolving on a central axis, and, in a crowded dining saloon, had to be placed so near to each other that a gymnastic feat was often necessary in order to negotiate a seat at the table. During meals "fiddles" were a frequent necessity, all plates, decanters, and glasses having special compartments to prevent their skidding or upsetting. To-day, however, the arrangement of the furniture is in all respects similar to that usual in a modern hotel. While every variety of table, settee, chair and sofa is to be found in the principal rooms, with the exception of the larger fittings every article of furniture is movable, and only screwed down when the weather is exceptionally rough.

In the dining saloons the long table d'hôte table has been eliminated, and gives way to a series of small convertible tables, which are readily extended and enlarged, so that passengers can arrange their

own parties. All the china and glass are now as dainty as that of the private home, and the greatest care is taken in the choice of suitable replicas of old Worcester, Crown Derby, Wedgwood and Sèvres, so as to harmonise with specially designed reproductions or adaptations of antique silver and old plate of the period chosen.

It is not to the details of the catering departments alone that the care of the expert and the connoisseur is confined. In all the public rooms will be found choice replicas and even originals of the Old Masters, as well as mezzotints, prints, and reproductions of notable excellence. In this connection it is not too much to say that the catalogue of works of art and interest to be found on board one of the latest vessels would be at least equal to that of many a small art gallery.

The architect must in every instance consider the special conditions under which the ship he is dealing with is intended to travel. It is obvious that the requirements of a liner steaming between Liverpool and New York are entirely different from those of another bound for a tropical climate. In all such cases a special programme must come into force; but there is no reason why a versatile architect, having once grasped the essential necessities, should not adapt his talents to the requirements of any particular problem which he may be called upon to solve. He will doubtless be required to design or to give his opinion upon all such important matters as the choice of pictures and tapestries, furniture, carpets, linen, china, glass, silver, electric fittings, and all the thousand and one harmonies of form and colour which, by reason of his special training and technical knowledge, he is so pre-eminently qualified to control.

It may not be out of place to give a short description of the work and the useful services that these great ships rendered in the war. As fighting ships, hospital ships and transports, to most of you the history of their exploits is familiar, and they fully justified all the expectations that were predicted of them. I will not enlarge on the wonderful work that was done in transporting the entire American army across the broad Atlantic, nor of the valuable services rendered by the great liners as hospital ships, but I will refer you to Mr. Archibald Hurd's very interesting book entitled *A Merchant Fleet at War*, in which he describes how a Cunarder, designed and equipped for the peaceful transport of passengers and goods, at the outbreak of hostilities was con-

verted into an efficient war weapon and fought a successful duel with the *Cap Trafalgar*, a ship of similar type.

To the *Carmania* fell this singular honour, and five years' war at sea produced few more kindling and romantic stories.

This is but one illustration among many of what these ships could do when stripped of their peace clothing and equipped in the stern accoutrements of war. Such exploits as that of the *Carmania* and the never-to-be-forgotten crime of the sinking of the *Lusitania*, which was principally instrumental in bringing the United States into the war, cannot be ignored when dealing with the history of the ocean liner. The sacrifices that the British shipping companies made were enormous, and can only be realised when one is informed that the losses in tonnage of a company such as the Cunard Line during the war were approximately 65 per cent. of their entire fleet; the other important companies suffering to a similar extent.

Long before the conclusion of hostilities the German submarine menace was well in hand, and new ships were being put on the stocks to replace the ill-fated vessels that had been sunk by the enemy. These post-war ships, some of which are now launched and ploughing the high seas, are designed on a somewhat different plan. The principal innovation is one which, although it may not directly concern the decoration, has fundamentally altered its main lines: I am referring to the use of oil instead of coal as a fuel. The introduction of this new method has greatly decreased the time expended in replenishing the fuel supplies, as a ship can now be refitted for her return journey in a few hours, whereas in the older vessels the coaling process takes several days; moreover, all the dirt and dust caused by the coaling is eliminated and the decorations and fittings are kept in better condition.

The great increase in the cost of building these post-war ships, owing to the advance in the labour market, has of necessity caused their designers to economise in every possible direction and to eliminate many delightful features which are not absolutely essential, but were merely introduced in the large pre-war ships to meet the competition of the foreign companies. The typical post-war ship is smaller and the tonnage less. The length is reduced from over 900 feet to 600 feet, the breadth from 90 feet to 73 feet, and the tonnage from 54,000 to 20,000. Efficiency and economy are the watchwords now in

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force. Swimming baths, gymnasia, theatres, have had, perforce, to go.

Owing to the new immigration laws which have been passed in the United States, the fourth class, or steerage, accommodation is no longer of the same importance as in more prosperous days. Fares have increased in proportion to the advance of cost of construction, and many innovations have been introduced to cope with the altered requirements of the present-day trade. Naturally, these requirements change each year, and it is quite possible that in a short time the larger ships will again come into fashion. However, the main principles that I have roughly indicated to-night govern the design of all ships from the small yacht to the largest liner. If applied intelligently, they may be of some use to those

who propose to attempt to work in this very interesting field.

Whatever our shortcomings may be as regards land architecture and decoration, we can reflect with justifiable pride that in ship construction the British designer holds the first place in the world's estimation. The vessels which have been built on the Clyde, the Tyne or the Lagan, whether they be battleship, liner or tramp, bear the stamp which marks them as being the aristocrats of the sea.

The reputation of our naval confrères is so high that it is for us architects who are entrusted with the decorations of the interior of their ships to see that this standard is maintained throughout, and that our joint labours are worthy of that genius for naval construction which commands the admiration of the world.

Discussion

THE PRESIDENT, MR. PAUL WATERHOUSE, M.A., IN THE CHAIR

Sir WESTCOTT S. ABELL, K.B.E. : Mr. President, ladies, and gentlemen,—I am afraid I am not qualified to speak as an architect, although I may have some pretensions to deal with the subject from the naval architect point of view.

We are very much indebted to Mr. Davis for the interesting lecture he has given, and particularly for showing us how it has been possible for architects and naval architects, mainly of the Cunard Company, to combine successfully the architectural requirements and the structural requirements of the ship. Personally, I think the greatest problem before the architect is designing the features of the dining saloon, because when you come to the public rooms at the top of the ship there is more opportunity for variety, for height, and for rectangular detail, whereas in the saloon you have a space which, over its main portion, may be 100 feet square and only 10 feet high. The trouble there is to get or to suggest height by breaking up or making wall space, which, in the latest development, runs to two decks. There are some very interesting features in the support of those decks, and I think more could be made—not perhaps in the big vessels, but in the average run of ships—by a closer co-operation between the architect and the naval architect. We find, as a matter of structural design, that the simplest and most economical method of support of big spaces is to have four pillars to rest on girders, two longitudinally, two transversely. Here the head room is a difficulty, but I think it would be possible to get a better division of the panelling, in the ceiling particularly, by a closer co-operation between the architect and the naval architect.

Mr. Davis gave you such excellent examples of architecture on board ship that some of the bad features

which I am afraid one occasionally sees were not made apparent. But one criticism I should like to make on architecture on board ship is that it does not seem to me to express as well as it might the spirit of the ship. I will use an illustration drawn from the propelling machinery. If you go to a man who makes land machinery, he is competent, or thinks he is competent, to produce an engine to drive a ship. But if you put a land engine on a ship, it does not go. If, on the contrary, you develop an engine which will work at sea, you may be sure it will work on land, and very often more efficiently than the land machine. Another factor equally important to the architect is that at sea weight is the dominant factor, and power for weight is the essential. Similarly in architecture. I think the architect ought to get his effects with as little weight as possible. I do not want to make invidious comparisons, but I think most of us know that the use of heavy materials, such as tiling and cement, which are used on land, ought never to be employed at sea. When they are used at all it is generally high up in the ship, which makes the ship top-heavy and more inclined to roll.

There is one point on which, perhaps, the naval architect can give some suggestions to the land architect. I refer more particularly to beauty of line. If you look at the under-water form of the ship, I think you will agree there are no more beautiful lines used in the world than those architects use. They are, however, of a type which it is almost impossible, I should say, to use in ordinary forms of land architecture; I mean the parabolic rather than the elliptical or circular form. I suggest to Mr. Davis, with all due deference, that the development of the parabolic style, particularly with regard to detail, might add simplicity of design, which

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both he and I agree is very essential in a ship, much more so than in land architecture.

I might also suggest that Mr. Davis did not touch on a feature which, I think, is very important—that is, the colour scheme on board ship. I was crossing the North Sea a few days ago in very rough weather in a comparatively old ship, and the accommodation was rather poor. But the worst thing we felt about it all was that there was not a fire on the ship, and there was not even the suggestion of one in a bit of red coloured glass which one might look at. I think a suggestion of a fire, or a suggestive colour scheme, to give brightness and lightness, which one often wants at sea in the winter weather, would be a help.

I have much pleasure in moving a vote of thanks to Mr. Davis. We are very grateful to him for a most interesting account of some of the best examples of ship architecture.

THE PRESIDENT: I shall now ask if Mr. Annan Bryce will be good enough to second the vote of thanks.

MR. J. ANNAN BRYCE: I was greatly honoured, Mr. President, by being asked to second this vote of thanks. I cannot pretend to the knowledge of architecture of the last speaker, because I am not an architect at all. But I am an amateur in the matter of architecture, and I have been, all my life, extremely fond of that old art as a layman and an outsider, and I have spent a good part of my life in going to places where fine examples of architecture exist. I have been, like all who have lived long enough to know what the old type of ship was, enormously pleased by the great progress which has been made in the last few years in architectural design in ships. I can remember the days of travel to the East, more than forty years ago, in the old P. and O. liners, very fine seaworthy vessels, but very uncomfortable to live in—dark, evil-smelling, ill-ventilated, the cabins open into the saloon where meals were taken, so that everything that went on in the saloon was heard in the cabins, and *vice versa*. That is a trying experience which no longer occurs to one making a voyage to the Far East or elsewhere in one of these great vessels. Mr. Davis's lecture was extremely interesting to me in one way, for it seemed to show what a large field was opening to the younger generation of architects in the exercise of their profession. The development which Mr. Davis has outlined is still incomplete. Considerable numbers of the great liners still do not employ architects. Anyone who goes to sea in a vessel on which an architect has not been engaged, and afterwards sails in one which has had that advantage, perceives an enormous difference. There are still, curiously enough, some departments of the vessel into which the architect does not seem to have penetrated, and one of these is the bathroom. The bathroom in some of the great liners is still left in the same crude, inchoate condition in which the lavatories and bathing rooms in the old

vessels were; you can see the rivets on the plain iron, and the bath itself is such as would disgrace a fourth-rate hotel. Let us hope that, just as various experts have been gradually introduced, we shall see in every department of these great ships expert advice operating.

I have great pleasure, Mr. President, and ladies and gentlemen, in seconding the motion to thank Mr. Davis, whose lecture has been, I think, to all of us of the greatest possible interest.

MR. H. W. WILLS: I think Mr. Davis has successfully shown us how the mere fact of being at sea can be absolutely obliterated on board a liner. I doubt whether that is the ultimate word in the designing of ships. I remember seeing drawings of an exceedingly evil and wicked fake; I think it was the Yacht Club of New York. In that stone was tortured into a most able representation of the poop of an old-fashioned galleon; there was not a line which was vertical, there was not a line which suggested the lines of timber, and the effect was very charming. And I am not certain that in the design of a ship we could not—working on old lines, the old romantic suggestions, the most romantic in the world, calling to our mind *Treasure Island* and stories of the pirate ships and the ships of the Vikings—I am not certain that we could not, as one of the speakers suggested, use parabolic or other lines which are dictated by the structural lines of the vessel. This scheme of decoration would certainly give us the idea that we were at sea, and possibly give us the thought that being at sea was not a bad thing after all. I am not certain that it would not be better than trying to take away altogether the impression that we were there.

MR. WARREN: I very much agree with the point of view which Mr. Wills has just expressed, also with the idea mentioned by the mover of the vote of thanks. After Mr. Davis's very interesting Paper and admirable illustrations—and having made in my time some few voyages in liners and otherwise—my opinion is that the architecture was unlike what ship architecture should be. The idea seemed to be to give you the comforts and discomforts of home and the modern hotel, flattened down a little in respect of height, to give you a close assimilation of a hotel at sea. The port-hole was disguised with sham windows, and I found a little garden on deck, with trellises, and a growing plant blowing about in the wind. The whole thing had an air of sham, which is a pity, because a ship is a splendid contrivance, and her decoration should be suggestive of the sea and of the nobility of her structural lines. It is a question of temperament, and your enjoyment of the sea and the naval architecture which surrounds you is also a question of your assimilating apparatus; but most people who have an appreciation of architecture and decoration will not feel that ship architecture which assimilates to land architecture, with pillars, columns, pilasters, etc., and reproductions of period architecture on board

ship, is at all comfortable when the ship begins to roll. When a Corinthian column assumes an angle of 70° to your vision, it does not produce a very comfortable feeling, and I think it is subversive of everything which is contemplated in architecture. I think a ship design which assimilates the design of an hotel, and a down-right design which has not grown from the lines and usages of the ship, is wrong, and I would like to see the architect empowered to let himself go in the direction of expressing the essential lines of the ship, making the port-hole a beautiful thing, as it well might be. Some years ago, having an opportunity of doing some architecture in connection with a college barge, I studied the details of the barge and its construction, and I learned much which was useful. There was no naval problem, because a barge generally settles on mud and stays there; but I got hold of that delightful book, Charnock's *Marine Architecture*, and I revelled in poops and other details and charming decorations given in the drawings of seventeenth and eighteenth century ships, and it gave me a sense of evolution which belonged peculiarly to the ship. And I do not see why there should not be an evolution in decorative art in connection with the modern steamship, whether it be oil or coal driven, not an assimilation to an inferior article of architecture, for that is imitating something which it is not, and that is stable architecture on shore.

Professor ADSHEAD: The discussion seems to have turned on the question of parabolic or period architecture for ships. I do not agree with the last speaker in his view that we should evolve a ship architecture out of dolphins and mermaids. I think the solution of the question of having period architecture and ship architecture lies in the correct appreciation of sheer and camber.

The PRESIDENT: I now propose to put to you the vote of thanks. I think we particularly owe our thanks to Mr. Davis for the generosity of his Paper. Mr. Davis has the entrée to a sphere of architecture which I have no doubt is pleasant from all points of view, and when a man of his position is good enough to come before his brother architects and let them into some of the secrets and explain some of the difficulties, as well as the pleasures of his successes, I think we owe him a very great deal. I knew we should have a good Paper from Mr. Davis; you all knew it, too, for you have filled the room. Some awkward questions have been put to him as to what should be the lines of decoration in relation to those of construction, and I am sure he will explain how they are to be made. When I heard his Paper it occurred to me what a delightful thing it would be in ship design to keep everything moving on a curve, that every useful line should be treated as a parabolic or other curve. And perhaps he will tell us, some day, how these things should be drawn.

Mr. DAVIS, in reply, said: Mr. President, ladies

and gentlemen, with regard to the criticisms which have been suggested, may I point out that when I was first engaged, some 15 years ago, to start this work, similar criticisms were the first that occurred to me. I said to the directors of the company who employed me: "Why don't you make a ship look like a ship?" and something like the delightful suggestions expressed by Mr. Wills, of pirate sea vessels and Viking ships, and of making a ship look like a ship, were in my own mind. But the answer I was given was that the people who use these ships are not pirates; they do not dance hornpipes; they are mostly seasick American ladies, and the one thing they want to forget when they are on the vessel is that they are on a ship at all. Most of them have got to travel, and they object to it very much. In order to impress that point upon me, the company sent me across the Atlantic. The first day out I enjoyed the beautiful sea, but when we got well on to the Atlantic there was one thing I craved for as never before, and that was a warm fire and a pink shade. The people who travel on these large ships are the people who live in hotels; they are not ships for sailors or for yachtsmen or for people who enjoy the sea. They are inhabited by all sorts of people, some of whom are very delicate and stay in their cabin during the whole voyage; others, less delicate, stay in the smoke-room all through the voyage; the programme of trans-Atlantic travel as it exists to-day is a very peculiar one. The directors of the various shipping companies impress their ideas on architects, and we have to follow the main lines of the programme. I suggest to you, as I did in my Paper, that the trans-Atlantic liner is not merely a ship, she is a floating town with 3,000 passengers of all kinds, with all sorts of tastes, and those who enjoy being there are distinctly in the minority. If we could get ships to look inside like ships, and get people to enjoy the sea, it would be a very good thing; but all we can do, as things are, is to give them gigantic floating hotels.

With regard to bathrooms, I have not shown many of those, for obvious reasons, one being that I have not a slide of the private bathroom I would like to show you. I agree with Mr. Annan Bryce that it is time the sanitary expert joined the architect in dealing with such things as bathrooms. It is very extraordinary, when you see these fine suites of apartments, in which every effort is made to produce a fine decorative effect, and then walk through the door into the bathroom and see painted bulkheads and the enamel baths, and plumbing which is a disgrace.

With regard to seeing Corinthian pillars oscillating, I admit that is rather uncomfortable, but it must be remembered that it is only in very exceptional weather that these large ships show any violent motion. At present we have not found anything better than the recognised forms of decoration, which are more or less cosmopolitan, for it is a cosmopolitan people who use these ships.

London of the Future*

By H. P. L. CART DE LAFONTAINE [A.], O.B.E.

THE remarkable collection of essays by members of the London Society on the various aspects of the development and growth of our great city forms a valuable contribution towards the solution of a problem of ever increasing urgency.

It is of especial interest at the present time in view of the probable extension of the boundaries of Greater London and the creation of some central co-ordinating authority, which all the contributors to this volume recognise as an essential preliminary condition without which no important improvements can be carried into effect. The volume opens with a "foreword" by Lord Plymouth, followed by a preface by Sir Aston Webb, which gives the reader an indication of the objects for which the London Society was formed, the work it has already achieved, and a concise summary of the essays which follow.

It is significant that although (as Sir Aston tells us) there has been no attempt to co-ordinate the opinions of contributors, there is general agreement that the two most urgent problems are the reconstruction of the railways and the improvement of traffic facilities.

The former is dealt with exhaustively by Mr. H. J. Leaning, who commences his study of the problem with a retrospective survey, showing how the present grouping of the railways and termini of the metropolis came about. He then turns to the proposals of the committee appointed by the London Society to investigate the problem:—"We have in our scheme disregarded all questions of ownership, and have not hesitated to alter routes and workings wherever the interests of the whole seemed to demand it, the one object being to secure a maximum of convenience at a minimum initial cost."

Mr. Leaning considers that the linking up of the various railway systems for local and suburban traffic by means of new tubes through the central area is a vital necessity. He goes on to demonstrate that (by a comprehensive scheme of regrouping) many of the present trunk line termini—such as St. Pancras, Cannon Street, Charing Cross, and Holborn Viaduct stations—could be removed without loss to public convenience. This proposal would clear the way for the removal of the present unsightly railway bridges over the Thames, which, in itself, would effect a notable improvement in central London and would render possible the realisation of the great scheme outlined by Mr. Waterhouse in his essay on "The Surrey Side." Mr. Leaning concludes his survey by outlining a scheme for goods and parcel

traffic, and mentions that the decision of the Ministry of Transport to group London railways together as one unit renders the proposed scheme of reconstruction more possible of achievement.

The problem of the "Roads, Streets and Traffic of London" is dealt with by Colonel R. C. Hellard, lately Superintendent of the London Traffic Branch of the Board of Trade. After a brief résumé of the history of the problem, Colonel Hellard turns to the consideration of the way in which it may be solved. He evidently shares the opinion expressed by the Select Committee on Transport in the Metropolitan Area, who "attributed the demoralisation of traffic in Greater London to the absence of a Supreme Traffic Authority, possessing executive powers to control, co-ordinate and safeguard public interests."

Dealing with the difficult question of street widening in built-up areas, Colonel Hellard remarks that "the policy of leaving each generation to deal with its own problems as they arise is unnatural and unsound," and shows that in actual practice it is often more economical and efficient to construct a new "bye-pass" road instead of expending a large sum of money on street widening. On the vital question of arterial and main radiating roads one specially notes the following paragraph: "Authority to prescribe building lines on all main radiating roads would be of the greatest advantage, particularly in the suburbs, in that it would arrest the growth of further obstruction and would help to lessen the difficulty and expense of widening. The Cambridge Road presents a very good example of the benefit that might accrue from the adoption of such a measure, where at each of the villages through which it passes the road is far too narrow. Opportunity could then be taken of setting back the building line to the new frontage as sales occur, or as leases of the unimportant premises fall in, before they are replaced by a more elaborate class of building on the original frontage, when all hope of improvement would vanish." Colonel Hellard concludes his survey by urging the necessity for the co-ordination of schemes for road improvement and the town planning schemes which now completely encircle London, and which may block every possible outlet unless they conform to a general plan.

Mr. Paul Waterhouse contributes a remarkable essay on the possibilities of the "Surrey Side," which will appeal both to the architect and the ordinary citizen. He traces the history of the Thames as a waterway, and the effect on the development of London of the bridges and underwater connections, and observes: "It would astonish many Londoners to be told that the square

* *London of the Future.* By the London Society, under the editorship of Sir Aston Webb, K.C.V.O., C.B., P.R.A. Illustrated. (London: T. Fisher Unwin.) 42s. net.

mile of which the western side runs from Drury Lane to the House of Lords, and which has its north-east angle in St. Paul's Churchyard, contains more of Surrey than of Middlesex." He continues: "The Surrey side offers splendid opportunities for effecting at less cost, and sometimes with greater directness, those improvements which on the City or Westminster side seem almost unattainable. . . . The problem can be divided into the foreshore question, the question of bridges, the question of traffic generally on the Surrey side, and the larger question of the development of the Surrey land as sites for important buildings."

Mr. Waterhouse then tells us how the committee appointed by the Society to examine the question arrived at the conclusion that the embankment (which must form an important part of any scheme) could be planned without interfering with the existing wharves by providing an interior waterway united to the river at certain points.

The author then deals in some detail with the planning, levels and extent of the proposed embankment in relation to existing and probable new bridges. On the traffic problems of the Surrey side—warning us that his views may not be shared by all his colleagues—he says: "In general criticism of the Lambeth-Southwark-Borough region, what it needs in the way of traffic facilities is more convenient through routes. The curve of the river naturally makes the lines of the bridges converge like the radii of a circle. The main roads coming in from the south similarly converge, and convergence of this kind, which gives no great trouble in a small town with a moderate business, becomes intolerable in a large town of supreme industry." . . . "The Surrey territory should from its position and shape form a convenient link between Westminster and the City, but the provision of any good east to west road across this tract of land has always been postponed or ignored." Turning to the question of the great new road bridge at Charing Cross, Mr. Waterhouse tells us he would not have this lead merely to a new railway station on the Surrey side, but proposes that (continuing on the axial line of Northumberland Avenue) a great new street should run over the bridge and on as far as the "Church of St. George, which stands with a good deal of quiet majesty at the end of Borough High Street, just at the point where that thoroughfare is joined by Great Dover Street and Long Lane." This scheme would secure a good connection for the new railway station . . . which would replace Charing Cross, Holborn Viaduct and Cannon Street, and which the author would place at "that triangle of ground . . . already rendered desolate by railway arches . . . just east of Blackfriars Road through which runs Gravel Lane," with both the City and West End, and would plant "hope and the chance of prosperity in the very heart of a derelict region which has never yet

enjoyed the opportunities which its close proximity to London proper deserves."

Mr. Raffles Davison contributes a chapter on "The Opportunities of London," containing many thoughts which apply, not only to London, but to most of our modern cities. He sums up the case for expert control in the following notable passage: "One of the most urgent and difficult aspects of the problem . . . lies in the continual change and developments which are bound to accompany the progress of invention and enterprise; . . . the time must surely come when certain limits will have to be fixed against the terrible congestion which threatens the well-being and life of modern cities. . . . Briefly put, the great need of the time is for adequately designed schemes, for better transport facilities—fine roads, definite plans for city beautification, and control as to the location of certain classes of buildings." After referring to the obstacles to the realisation of this ideal, . . . chief amongst which are the difficulties which occur in dealing with financial and vested interests. . . . Mr. Davison goes on to describe the method adopted by the London Society in the study of various aspects of the problem by the appointment of committees, and remarks that the conclusion reached has always been that schemes for improvement could not be carried into effect "without the provision of some controlling authority, which should deal with the problem as a whole."

Another passage which merits special attention runs as follows: "A fine city needs fine vistas, important centres should have some cohesion of architectural effect, circuses and squares ought not to be surrounded by haphazard collections of buildings; our pavements are generally too narrow, street signs and advertisements are too much out of control, whilst all sorts of ugliness are permitted in the uppermost levels and skylines of our buildings."

Mr. Davison concludes his essay with an appeal for continuity of effort and a development of civic pride as an essential to the improvement of London.

Sir Reginald Blomfield contributes a chapter on the "Bridges of London 1815-1920," which should be a source of inspiration to all those who in the future are entrusted with planning and building the new bridges of our city, while Sir Arthur Fell, in a chapter on "London and the Channel Tunnel," urges the necessity for a great new Empire Station on the Surrey side, approached by a worthy bridge from Charing Cross.

"Central London" forms the subject of a chapter by Professor S. D. Adshead, whose knowledge of the problems of town planning in "built-up areas" lends particular interest to his views. The essay contains much which deserves careful study by those interested in the improvement of the central area of the metropolis. Professor Adshead points out that there are times when the process of rebuilding attains the proportion of reconstruction, as at present, when "the hundred-

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year leases that followed Waterloo are expiring, and we are at the termination of a World War."

Mr. Raymond Unwin contributes "Some Thoughts on the Development of London."

It is interesting to note that he considers the three great needs of the moment are, firstly, a broad, comprehensive scheme for London as a whole; secondly, the "creation of some unity of control, with a general staff to think out and plan the policy for this great city"; and, thirdly, the reservation of a "green belt . . . around London to protect its inhabitants from disease, by providing fresh air, fresh fruit and vegetables, space for recreation and contact with and knowledge of nature." On the question of land values, he is of opinion that "the proper development of London cannot be brought about while the individual owners of small patches of ground retain the right to use that ground for whatever purpose they think best, having regard only to their own interest."

"The Housing of London" forms the subject of a chapter by Mr. Davidge: he agrees with other contributors in urging the necessity for the creation of some central authority to deal with the question as a whole, and, on the subject of transport, remarks that "good travelling is, indeed, the key to good housing," illustrating his survey by some striking diagrams. Mr. Davidge also emphasises the necessity for town planning; at present it often happens that any new development in a district tends to rob it of some of its natural charm. He also suggests that "no one should be allowed to design a house unless he knows how to do it in such a way as to add to, or at least not to spoil, the beauty of the neighbourhood."

Mr. W. E. Riley contributes an excellent chapter on the complex subject of "The Government of London," and (having regard to his long experience as Chief Architect to the L.C.C.), it is interesting to note that he also is of opinion that a central co-ordinating authority is the chief need for London at the present time.

Lord Devonport is the author of a chapter on the "Port of London," in which he traces the development and growth of the London docks and their part in the life and growth of the metropolis.

"The Parks and Open Spaces of London" are sympathetically dealt with by Mr. Niven, who draws attention to the close connection which exists between the adequate provision of open spaces and the physical well-being of the population, and refers to the development plan of Greater London recently published by the Society, where a scheme for linking up the outlying open spaces and the formation of a park belt is indicated for the first time.

We may not all agree with Mr. Niven's suggestion that such roads as Piccadilly, Knightsbridge, and the Bayswater Road should "immediately be doubled in apparent width and increased infinitely in importance

and attractiveness by pushing back the high, prison-like railings, so as to leave an outer strip of ground for development as a boulevard garden," but would prefer that the precious heritage of our great parks should remain as they are, especially as it is also suggested that "desirable locations for regimental or other memorials, set to terminate the vistas down important streets," might form part of the scheme. One feels that this would tend to destroy the distinctive charm of our great open spaces, a charm peculiar to London and not to be found in any other city.

The Earl of Meath, in a chapter on "London as the Heart of the Empire," urges that it is time that London should be recognised as the capital of the Empire. He suggests that the leading representatives of the Overseas Dominions, of India, and of the Crown Colonies should be co-opted—during the time they are resident in our city—on the governing bodies of London, "so that all parts of this great confederation of States . . . may feel that they possess a governing interest in the management of their great capital, and that each citizen of the Empire, when he visits London, may feel that this vast city . . . is part and parcel of him or her and not a strange, though interesting city like Paris or Rome." This is a great idea, and one hopes it may be possible of fulfilment in the near future: it is especially important, as the unifying power of sentiment is a special characteristic of our race.

Lord Montagu of Beaulieu contributes a chapter on the future of commercial aviation, and discusses the problems of landing places and air mails in their relation to the future development of London; while an essay by the late Sir William Richmond on "The Smoke Plague of London" makes one echo the words of Sir Aston Webb (in his preface to the volume): "Sir William Richmond is a great loss, and a successor is sorely needed to continue the crusade." The essay (after some introductory remarks on the history of the smoke plague and the ever-recurring—but abortive—efforts to diminish it) describes the work done by the Coal Smoke Abatement Society and the progress made in arousing public opinion on the subject.

The concluding chapter, on "The Spirit of London," by the Marquis of Crewe, is full of imagination and literary charm. The purpose of the volume is summed up by Lord Crewe in the following words: "It is the conclusion of the whole matter that in designing great London improvements we ought to revere, and so far as possible to conserve, what is left of the London of the past. To ensure this has been the aim of the London Society since its foundation . . . In the reorganisation of London we cannot stand still, and we ought not to stand still; but we can advance with reverence and see to it that the immemorial spirit of London does not suffer amid the rush and stress of our modern life."

Correspondence

UNIFICATION AND REGISTRATION

17 February 1922.

To the Editor, JOURNAL R.I.B.A.,—

DEAR SIR,—There is every prospect of the Council's actual proposals in the matter of Unification being laid before the members of the R.I.B.A. long before the next General Meeting for consideration of the matter can be held; but it will be well to correct some of the imaginary ones at once. In the first place there is the now familiar fiction of the words "all architects" used in the sense of all who call themselves architects being admitted to the Institute. Happily, those who deal with the business of the R.I.B.A. know exactly what an architect is, and are in no danger of mistaking an undertaker for one. Those who, all too credulously, accepted this fiction should look through Scheme A—published in the JOURNAL for 28 May 1921—and they will be reassured.

Then there appeared at the meeting on the 7th an impression that the suggested temporary procedure for admission to the R.I.B.A. was actually to be permanent. This is not the case, and a reference to Scheme A makes it clear.

One speaker referred to all outside architects being admitted to the class of Associates. It is scarcely necessary to explain that this is not intended.

What one would like to hear explained is why Mr. Cross and Mr. Hubbard, after preaching Registration by Statute steadily for a great many years and addressing meetings up and down the country on it, are now suddenly convinced that it is an impossibility. It is a view that many of us cannot share. Also, why Mr. Perks, having distinctly stated that a Registration Act will "never" be obtained, asks us to postpone Unification until such time as a Registration Bill becomes law. It is an odd proposal, but perhaps he has some ground for it that is not apparent.

As an Institute man, I naturally wish Unification to be in the hands and under the direction of the Institute, and not in the hands of a body set up by Act of Parliament. May I give just one instance of how registration under an Act operates? It comes to me from Mr. Hurst Seager and relates to New Zealand, where registration by statute is an accomplished fact. A builder applied for registration, was refused, applied to the Court under the terms of the Act and was placed on the register because the Judge was satisfied that he practised as an architect. It is apparent at once that this would not happen under Scheme A for Unification within the R.I.B.A.

May I point out, especially to the younger men in opposition, that the same warnings and alarms as the present ones were heard when the class of Licentiates was

formed about twelve years ago? It was stated that the prestige of the Institute would suffer, that men of good standing would withdraw, and all the rest of it. I think no one will contradict me when I say that the Licentiates have justified the measure of confidence reposed in them, that they have shown great abilities, and that their alliance with the Institute has been of much value to it. So much is this the case that it is generally felt to be due to them that they should have a larger share in the management of and responsibility for the affairs of the Institute.

Is it too much to ask for the opposition that is being so strongly and, as I think, unfairly pushed to be held over until the Scheme of the Council in detail is published? At present the talk about the matter is wide of the mark, and the desire of those who are working the opposition seems to be to prevent the Council from being given time to develop its Scheme and place it before the members.

A thing not sufficiently realised is that we have legal power to prevent any outside architect from using initials that would suggest membership of the Institute. A Registration Act might give us the power to prevent anyone not on the Register from using the designation of Architect. Which has more value?—Yours faithfully,

ARTHUR KEEN [F.],

*Hon. Secretary,
Unification and Registration Committee.*

45 New Bond Street, W.1.
21 February 1922.

To the Editor, JOURNAL R.I.B.A.,—

SIR,—As a member of the Unification and also the Associates' Committee, may I crave your indulgence to add to the voluminous literature already published on the above subject?

I should like to take the opportunity of publicly dissociating myself from the views expressed by the proposer and seconder of the "reactionary resolution" that was so nearly carried at the last Special General Meeting of the Institute.

What possible objection can Mr. Cross find to giving the benefit of his views to the Unification Committee, as was suggested in Mr. Buckland's amendment? Not only does he vote against the amendment, but persistently refrains from attending this Committee, of which he is a member, thus leaving his colleague, Mr. Perks, in an aggrieved minority of one.

Mr. George Hubbard, who is neither a member of the Council nor of the Unification Committee, in seconding the resolution, came perilously near to killing his own child. He admits that the creation of the Licentiates class, in which he played such a large part, has brought us not one whit nearer to Registration; yet now that another scheme for Unification is in the making he will have none of it, although, for all he knows, it

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may profit by mistakes of the past and ultimately achieve success.

I am aware that criticism of such high personages of the Institute does not come well from an Associate of my humble standing, but when I hear Mr. George Hubbard aiding and abetting such a reactionary policy, it is time for the younger generation to register a protest, even if they are prevented from "Registering" anything else.—Yours faithfully,

P. W. HUBBARD, M.A. [A.].

ARCHITECTURAL EDUCATION AND OVERCROWDING.

34 and 35 Bedford Square, London, W.C.1.
17 February 1922.

To the Editor, JOURNAL R.I.B.A.,—

SIR,—In view of the general discussion which has been taking place recently in connection with the numbers entering the architectural profession, and the suggestion made that the schools are unduly encouraging students to enter a profession in which there is little chance of their obtaining a reasonable livelihood owing to its already overcrowded state, the Council of the Architectural Association has asked me to issue the following statement as to the steps taken to ensure that only those who show an aptitude for architecture, and are likely to become efficient and useful members of the profession, are allowed to enter or remain in its schools.

In the first instance, no candidate's application for admission will be considered unless he or she has attained to a good standard of general education, equal at least to the Senior Oxford or Cambridge Local examination or London Matriculation. Applicants who produce the necessary evidence of having reached the standard of general education required are interviewed and at once advised if it is considered that they are not fitted for the architectural profession.

Approved candidates are allowed to sit for the Entrance Examination, which consists of the following subjects :—

1. English Composition.
2. Freehand Drawing from the Cast.
3. Mathematics (Algebra, Quadratic Equations).
4. Geometry (Intersections of Solids).

A "Pass" must be obtained in subject 2, and in any two of the remaining subjects.

It is not suggested that the examination is an infallible test of the candidate's suitability, but it does afford an opportunity of obtaining at least some indication of the ability and type of mind of those sitting for the examination, and a fairly broad view is taken in arriving at a decision as to which candidates are to be admitted and which not.

Those entering the School do so on a year's probation; and if they do not justify their admission during

that period, they are asked to leave and are advised to take up some other calling.

I think it will be seen that it is not an easy matter for a student to enter our Schools, and that it is not the case that admission is granted haphazard to anyone who cares to ask it, irrespective of suitability for the profession of architecture.

If the architectural profession is overcrowded, it is certainly not overcrowded with well-trained men, and as evidence of this I may state that even during the worst times there is little or no difficulty in obtaining paid employment for those leaving our schools on completion of training.—Yours faithfully,

WILLIAM G. NEWTON [A.], President,
Architectural Association.

COLOUR COMPETITION.

20 Bedford Square, London, W.C.1.
10 February 1922.

To the Editor, JOURNAL R.I.B.A.,—

DEAR SIR,—I am much interested by the particulars of the above competition which have reached me to-day, and think that this competition is likely, at any rate, to produce interesting results on paper.

There is one sentence in the conditions of the award, however, which to my thinking rather mars the scheme as an incentive to design on the part of trained architects.

This is: "Three premiums . . . will be awarded to the best colour designs, irrespective of architectural excellence."

This seems to be a very dangerous condition, since the obvious intention of the competition is to produce the best scheme for architectural decoration in permanent colour, and no such design can be arrived at without the careful consideration of architectural proportion and emphasis, and its suitability to carefully designed detail, appropriate to the purpose and construction of the façade in question.

The study of successful polychromy in architecture almost invariably shows that the polychromatic intention was kept in view in the design of a building or portion of it which was to be decorated in colour.

I should hope that it may still be possible to change this condition, which seems to me to be seriously detrimental.—I am, dear Sir, yours faithfully,

EDWARD WARREN [F.].

ARCHITECTS AND THE NATIONAL HOUSING SCHEME.

The Council have received from the Official Architects' Association and from a large number of the Allied Societies communications supporting the action taken in the matter of the recent attack upon architects in connection with the National Housing Scheme.

The Library

NOTES BY MEMBERS OF THE LITERATURE COMMITTEE ON
RECENT ACQUISITIONS.

[These Notes are published without prejudice to a further
and more detailed criticism.]

THE BUILDING ESTIMATOR, for the use of Surveyors, Builders and others concerned in the estimating of Building Costs and the Ordering of Building Materials. By B. Price-Davies, F.S.A., M.S.A., etc. 40, Lond. 1922. 12s. 6d. [The Educational Publishing Co., Ltd., 9 Southampton Street, Holborn, W.C.1.]

This is an excellent book for anyone who has to make accurate building estimates. It consists almost entirely of tables clearly printed and condensed into about 100 pages. Owing to fluctuations in costs of labour and materials, prices are not given. But the price of any item, with any given rate of wages and price of materials, can be found with a minimum of calculation by means of the labour constants and ready reckoned tables. The labour constants are based on sixty post-war contracts.

A. H. M.

LUTYENS'S HOUSE AND GARDENS. By Sir Lawrence Weaver. 10s. 6d. [The Country Life Library.]

This is a smaller edition of a volume published in 1913. It provides in handy form a most interesting record of contemporary English domestic work, by one who has done so much to revive a general interest in architecture, both as a fine art and as a practical translation of utility into terms of a lasting beauty in design. We can see in this book how much hard thinking adds to a native capacity and enthusiasm; and how good general considerations as well as sound building craftsmanship are made, by a general control, and contribute their respective qualities to a whole conception. We owe much to the designer for what he has provided, but we are also indebted to the writer of the volume whose interest and energy has made such a record possible.

H. C. C.

INNS AND TAVERNS OF OLD LONDON. By Henry C. Shelley. Lond. 6s. [Sir Isaac Pitman and Sons, Ltd.]

The tavern has played so great a part in the life of the London citizen that this book setting out the historical and literary associations of ancient hostleries should prove useful to students of men and manners of the past. It is illustrated with reproductions of old engravings.

W. H. A.

CINÉMAS, vues extérieures et intérieures. Détails. Plans. By Gaston Lefol and E. Vergnes. Portfo. Paris [n.d.]. £1 10s.

Cinéma, edited by Gaston Lefol, with notes on construction and design by E. Vergnes, is a valuable record of contemporary French designs. The illustrations show many of the most recent buildings of this nature, with working drawings and photographs, and the book is a valuable and interesting contribution to the study of the subject from the French point of view.

H. A. H.

BRITISH HERALDRY. By Cyril Davenport, V.D., J.P., F.S.A. With 210 illustrations by the Author. 80, Lond. 1921. 6s. [Methuen and Co., Ltd., 36 Essex Street, W.C.]

This is a hand-book containing, in a condensed and convenient form, much necessary and preliminary information for the student of Heraldry, and leading up to the more important works on the Art, such as those of Fox-Davies, Boutell and St. John Hope, already in the Library. It gives, by the way, for the first time, a useful classified list of supporters.

C. H. T.

Review of the Work of the Conjoint Board of Scientific Societies

By H. D. SEARLES-WOOD, VICE-PRESIDENT R.I.B.A.

In 1916, at the instance of the Council of the Royal Society, a Committee was appointed to consider the advisability of entering into communication with technical and scientific societies with a view to establishing a permanent Board for the discussion of questions in which joint action seemed desirable.

On 22 March 1916, following upon the appointment of this Committee, a conference was held with representatives of the leading Scientific Societies, at which the following resolution was passed:—

"That it is desirable to establish a Conjoint Board of Scientific Societies for the purpose of (1) promoting the co-operation of those interested in pure or applied science; (2) supplying a means by which the scientific opinion of the country may, on matters relating to science, industry and education, find effective expression; (3) taking such action as may be necessary to promote the application of science to our industries and to the service of the nation; (4) discussing scientific questions in which international co-operation seems advisable."

A Committee was appointed to draw up a scheme in order to give effect to this resolution, and the scheme so prepared was submitted to, and formally accepted at, a second conference held on 12 June 1916.

The Committee's scheme then became the Constitution of the Conjoint Board of Scientific Societies, representing the following:

Royal Society	Institute of Civil Engineers
Royal Society of Edinburgh	Institute of Electrical Engineers
Royal Irish Academy	N.E. Coast Institution of Engineers and Shipbuilders
Royal Aeronautical Society	Institution of Engineers and Shipbuilders in Scotland
Royal Anthropological Institute	Faraday Society
Royal English Arboricultural Society	Institution of Gas Engineers
Royal Institute of British Architects	Geological Society
Royal Society of Arts	Illuminating Engineering Society
Royal Astronomical Society	Iron and Steel Institute
Royal Engineers' Institute	Linnean Society
Royal Geographical Society	London Mathematical Society
Royal Horticultural Society	Institution of Mechanical Engineers
Royal Institution of Great Britain	Institute of Metals
Royal Society of Medicine	Mineralogical Society
Royal Meteorological Society	Institute of Mining and Metallurgy
Royal Microscopical Society	Institution of Mining Engineers
Royal College of Physicians of London	Institution of Naval Architects
Royal Statistical Society	Optical Society
Royal College of Surgeons of England	Institution of Petroleum Technologists
Highland and Agricultural Society of Scotland	Pharmaceutical Society
Institution of Automobile Engineers	Physical Society
Institute of Brewing	Physiological Society
British Association	British Psychological Society
Society of Chemical Industry	Röntgen Society
Chemical Society	Surveyors' Institution
Institute of Chemistry	Zoological Society

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The work of the Board has, on the whole, come within the scheme given above, but during the War it became necessary to undertake a certain amount of research and some other duties not originally anticipated.

It is not easy to classify the work very rigidly, as much of it is concerned with more than one aim.

1. Into the first category falls the endeavour of the Board to draw up a scheme for the publication of a list of Scientific Periodicals, with an indication of the libraries in which they can be consulted.

The Board also issued for two years, at a considerable strain on its resources, a fortnightly Bulletin of the meetings of Scientific Societies, with an indication of the papers to be read thereat.

A Committee was instituted to consider the prevention of overlapping by various societies, and an attempt was made to avoid the clashing of meetings in allied subjects and to bring about the approximation of days of meetings of kindred societies for the advantage of country members.

Another Committee organised a deputation to the Office of Works to press the allocation of a Government site for the purpose of housing allied Technological Societies in juxtaposition.

During the War the Board secured certain concessions to the constituent societies in regard to the supply of rationed paper, but it failed to obtain any reduction in the cost of postage of scientific periodicals.

In the matter of censorship of scientific publications during the War the Board stood between the societies and the Censor's Department, and through its influence greater discretion than was at first contemplated was granted to such publications.

2. Into the second category mainly falls the work of the Watching Committee on Education. Meetings were held in the first instance with the Council of Humanistic Studies, at which a series of resolutions were drawn up to indicate the points of view which were held in common by the two bodies. The Committee also drew up resolutions for transmission to the Government Committee on Science in the educational system of Great Britain; reported on the findings of the Commission on Civil Service Examinations, Class I; and criticised the Final School Examinations of the Board of Education and the standard for entrance, and scholarships at, the Universities. The Board also nominated representatives of various sciences and technical subjects to give evidence before the Government Committee on Science in Education.

A second Committee co-operated with the British Association in a scheme for higher education in Geodesy and for the establishment of a Geophysical Institute in Great Britain. One outcome of this Committee's report is the establishment of new work in these subjects at Cambridge.

Other Committees were concerned with "the Application of Science to War and to Industry," the advocating of an Anthropological Survey of the inhabitants of the British Isles, and the advisability of the unification of Patent Laws throughout the Empire, together with the adoption of certain improvements from the practice of other countries.

3. Probably the most important part of the work of the Board falls into the third category—ranging from the deputation sent in 1916 to wait upon the Marquess of Crewe, then Lord President of the Council, up to the attempt now being made to interest the Government in the financial position of Scientific Societies and to obtain a grant in aid of their scientific publications.

To the Deputation mentioned was made the announcement that:—

"The Government have decided to establish a separate Department of Scientific and Industrial Research for Great Britain and Ireland, under the Lord President of the Council, with the President of the Board of Education as Vice-President. They have also decided, subject to the consent of Parliament, to place a large sum of money at the disposal of the new De-

partment, to be used as a fund for the conduct of research for the benefit of the national industries on a co-operative basis."

Two of the Committees under this head have been led to undertake research of a character which required the co-operation of several different sciences and the united action of members drawn from three or four of the constituent societies.

The first of these Committees investigated certain anomalies revealed in the magnetic survey of Britain, which it was thought might indicate the existence of large bodies of iron-ore. A test case was selected and a detailed magnetic survey carried out, accompanied by a geological examination of the rocks and their occurrences and the collection of materials, the magnetic susceptibilities of which were tested. Assistance was given by the Royal Society and the Geological Survey, and a report of the investigation published in the Philosophical Transactions of the Royal Society. It was shown that though the disturbance was not the result of workable ore-bodies, the observations gave considerable assistance in the elucidation of the complicated earth-crust structure at the test locality.

The second Committee faced the possible shortage of glue and other adhesives owing to war conditions. A grant of £1,000 from the Ministry of Munitions, Air Group, was expended in research, of which part of the outcome was: (1) A more economical method of preparing casein adhesive; (2) the discovery of a new and satisfactory adhesive prepared from a waste product, of which ample supplies existed in the country even during war time; (3) the discovery of a satisfactory water-proof adhesive suitable for aeroplanes and other work. The work of this Committee was considered to be of such importance that the staff and arrangements were taken over by the Department of Scientific and Industrial Research, and continued in operation under a Committee on which several members of the Board have seats.

Some other work under this head relates mainly to war conditions, such as that of the Timber Committee, which was nonunited by the Air Ministry as its Advisors on Aeroplane Timber; and that on the conservation of scientific observations recorded in the former German possessions.

Work in connection with industry was carried out by the Committee on the application of Science to Agriculture, which issued valuable reports and interviewed the Board of Agriculture on the question of the design of an electric tractor and other agricultural machinery; by the Committee on Technical Optics, which was concerned with a scheme for instruction in this subject; and the Petrophysical Institute Committee, which drafted a scheme for a national institution to investigate the physical and chemical conditions which determine the formation and crystallization of minerals, a scheme, however, which proved so costly that it became obvious that its fulfilment would have to be postponed.

But perhaps one of the most important pieces of work undertaken by the Board has been that of its Committee on the Water Power Resources of the Empire, which has drawn up three elaborate reports, the third of which has now been sent to members of the Board. The resources of the whole Empire, so far as information on them was accessible, were carefully considered and estimated, and a series of recommendations for their security and conservation were drawn up and presented to the appropriate Government Departments.

4. Into the last category comes the work of two Committees. The first was requested by the Royal Society to consider the question of the continuation of the International Catalogue of Scientific Literature, and to suggest modifications in the preparation of the Catalogue which might seem advisable. After a long series of meetings, this Committee reported on the question to the Royal Society.

The other is the Committee on the Compulsory Adoption of the Metric System, which drew up a report that the Board eventually decided should be circulated on the authority of the Committee, and not by the Board itself.

The Board constituted, at the request of the Royal Society, a series of Committees to ascertain the opinion of the societies upon certain proposals, formulated at the International Research Council at Brussels, for the institution of International Unions in the several branches of science represented by the societies, and the formation of National Research Councils in connection therewith. When it was founded, the Conjoint Board was designed for the twofold purpose of bringing about co-operation between Scientific and Technical Societies, and of giving authoritative expression to the opinion of scientific and technical men on many of the more serious problems of the day.

It would seem advisable during the present transition period to maintain the Conjoint Board in existence, and when affairs become more settled to reconsider the question of its constitution.

Unification & Registration

In response to a written requisition signed by the required number of members, a Special General Meeting was held on Tuesday, 7 February 1922, at 5.30 p.m., the President (Mr. Paul Waterhouse) in the Chair.

The PRESIDENT: I will call upon the Secretary to read the notice convening this meeting.

The Secretary read the notice.

The PRESIDENT: I will now call upon some member to move the motion just read.

Mr. A. W. S. CROSS, M.A., Vice-President: Mr. President and gentlemen,—In rising to move the resolution which will shortly be before this meeting, I venture to express the hope that as so many of the gentlemen present have come from a considerable distance, the subject before this meeting will be brought to a definite issue. I move

“That this Meeting is of opinion that the conditions for the Unification of the profession should form part of a Registration Bill, and that the present system of admittance to the Institute, including compulsory examination, should continue in force until a Registration Bill is passed.”

May I make my introductory remarks now?

The PRESIDENT: Please: I am looking upon you as the mover of the motion.

Mr. CROSS: I do not propose, gentlemen, to address you at any length, for many reasons, one being that we have so many of our Provincial members attending here, whose views on this vexed question of Unification and Registration we should all be glad to hear. And, to be quite frank with you, Sir, and with the meeting, there is no doubt there is a very strong opposition amongst our members in various parts of the country to the Council's proposals, and so, with the object, *inter alia*, of endeavouring to arrive at a *modus vivendi* with opponents at an early stage, as early a stage as possible, in this controversy, we applied to you, asking whether you would be good enough to convene a special meeting to hear what we have to say on behalf of those who think with us, and I venture to assure you of our appreciation of your great kindness in so promptly acceding to our wishes. I have no hesitation in appealing to the members present to try to look upon the resolution I have just moved as being a genuine attempt on our part to reconcile conflicting opinions. The situation to-day, as I understand it, is that the Unification and Registration Committee in May last recommended to the Council four resolutions, which were subsequently accepted by the Council. Of these four, we are only concerned with one at the moment, and that one defines the policy of the Council with regard to Unification and Registration in the following terms:

“That the principle of Scheme A—namely, the bringing of all architects into membership of the R.I.B.A.—be adopted as the basis of Unification.”

These are the terms of a perfectly clear, definite and intelligible resolution adopted by the Council, the meaning of which it is impossible to mistake. By the terms of the resolution of which these words form part, the Council is offering a voluntary system of unification for membership without examination. For how can all the architects of the United Kingdom be brought into membership of the R.I.B.A. by examination? Presumably none of us really want to increase the membership of the Institute by what, I venture to suggest, is the logical outcome of resolution 1; and if the membership is to be increased, it is obvious there is only one way to do it—namely, by the adoption of examination tests. But in that case resolution 1 must be redrafted, and, as a sequence, the term “Unification” must disappear, because unification is not compatible with membership by examination. In other words, until a Registration Act is obtained this Institute must remain in precisely the same position as regards outside architects as it stands to-day. A close scrutiny of the late Council's proposals from the legal standpoint seems to show that one of their main objects is to facilitate the absorption by this Institute of the Society of Architects; and, it seems to me, another point is to confer a hall-mark of qualification upon the quack architect, who is, we hope, a member of no society at all. I think if it were certain that eventually the R.I.B.A. would be able to exercise control over the whole profession, most of its members would be prepared for any present sacrifice. But our chances of obtaining statutory powers grow more remote each day. I understand that the Surveyors and the Civil Engineers have abandoned their Bill; and of course, if and when our Bill is ever presented, we shall have those bodies opposing us. If we do not succeed in obtaining a Bill closing up the profession, any sacrifices which can be made will be made in vain. The only Architectural Society which possesses a Charter is the Institute, and the prestige of the Institute will not be increased, but will actually be diminished, by the wholesale influx of members. Take the case of the Royal Academy: does anyone suggest that the prestige of that body would be increased if every painter, every sculptor and architect in the United Kingdom were able to join it? In the full light of the past experience of the various unsuccessful attempts to deal with this problem of Registration, the Council should not have consented without due deliberation, discussion, and criticism to give their support to a proposal under which the substance—represented by the prestige and unique position of this Institute—is to be dropped in favour of the shadow—exemplified appropriately enough by the extremely remote chance that, in the distant future, some paternal Government will kindly allow this Institute to manage the affairs of the whole architectural profession.

Mr. GEORGE HUBBARD [F]: May I be permitted to second this resolution? I should like, Sir, to have it clearly understood that there is no difference or ill-feeling between the R.I.B.A. Defence League and the Associates' Committee. As Mr. Cross has already told you, the Council adopted four resolutions, and there can be no mistaking the meaning of the words of the Council to the effect that the principle of bringing all the architects of the United Kingdom into membership of the R.I.B.A. be adopted. No mention is made of any test or examination. The object of thus opening the doors of the Institute is in the hope that the Institute might be able to speak as one man, and that, speaking as one man, it would have a better chance of obtaining a Bill, or an Act of Parliament, by which we should become registered. None of us are opposed to Registration, and I think most of you must know the somewhat leading part which Mr. Cross and I played in 1908, when there was very much the same feeling in the air as there is now, and we embraced the Licentiates. Mr. Cross and I went through the Provinces and we lectured; we went to Wales and to Ireland; and the net result of it was that we brought in some 1,100 odd Licentiates into the Institute. The object then was, in its way, Unification, in the hope of

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getting a Bill through Parliament. It did not bring us one inch nearer that result. We remain to-day exactly as we were then, without the ghost of a chance of getting a Bill through Parliament. The only chance of getting statutory powers hereafter is if we can show it is in the public interest. Parliament does not care a straw about the taste or style of your architecture, and it will not give statutory powers on those lines. Still, we are, I think, all in favour of Registration. The matter which you should go for, in the first instance, is the Bill. If you get a Bill through Parliament, then let us make any sacrifice you like and have Unification. But it is the Bill first, Unification afterwards. If this measure of Unification is carried through, I think you will be surprised at the number who will resign. Amongst the hundreds of letters we have received, I may be allowed to read portions of two I received only this morning. Mr. E. G. Catchpole, of the Town Hall, Blackburn, puts the whole thing in a nutshell. He says: "I entirely agree with the proposal advocated by the R.I.B.A. Defence League, and I shall be glad if you will add my name to the list of members. I am not opposed to Registration, but to the principle of bringing in all the outside architects into membership of the Institute before the passing of a Registration Act, and until a Bill becomes law I am of opinion that no alteration should be made in our Charter and Bye-laws with a view to facilitate the admittance of new members." I entirely agree with that. Mr. James Hembrow, of Manchester, says: "I propose that the whole of the Associates of the Defence League resign *en masse* as a protest, and form a new body called 'The Association of Qualified Architects.'" That shows the spirit that is being felt by a very great number of Associates. I have very much pleasure in seconding Mr. Cross's resolution.

The PRESIDENT: Before I ask for further speeches, I will ask the meeting to listen to a resolution which Mr. Keen has to read.

Mr. KEEN (Hon. Secretary): A meeting was held this afternoon of the Unification and Registration Committee, and they passed this resolution:

"That this meeting of the Unification and Registration Committee reaffirms its resolution of 12 May 1921, that the principle of Scheme A—namely, the bringing of all architects of the United Kingdom into membership of the R.I.B.A.—be adopted as the basis of Unification."

And it was resolved that the terms of this resolution should be conveyed to the special meeting to be held this afternoon.

The PRESIDENT: I thought it would be only fair to the bodies whose names are on the paper in my hand that certain resolutions of theirs should also be put before this meeting. Will you read those, Mr. Keen?

Mr. KEEN: This was the Associates' Committee resolution which was carried on 2 February:

"That in the opinion of the Associates' Committee, if the resolution on the Agenda paper at the Special General Meeting called for Tuesday next, 7 February, is carried, the Unification of the Profession will be indefinitely postponed. The Committee has ample evidence that, although there are differences of opinion as to details, the great majority of Associates are in favour of Unification, whether or not Registration is immediately obtained."

Liverpool: Resolution passed at a meeting of the Associates in Liverpool in October 1921:

"That this meeting of Associates of the Royal Institute of British Architects resident in Liverpool and District is agreed that Unification is an indispensable prerequisite to Registration by Act of Parliament, and would urge that every effort be made to secure the Unification of the Profession."

Manchester: Resolution passed at a meeting of the Associates in the same month:

"This meeting, having considered the point of view expressed by certain members who are opposing the scheme—namely, 'That if Registration by Act of Parliament does not

materialise for some time, the present suggestion of Unification is a false step'—is agreed that Unification, apart from any details at present proposed, is an essential preliminary, and is prepared to support the same from the advantages which it would bring."

Newcastle: Resolution passed at a meeting of Associates held in Newcastle, November 1921:

"That this meeting of Associates of the Royal Institute of British Architects resident in Newcastle and District is agreed that Unification is an indispensable prerequisite to Registration by Act of Parliament, and would urge that every effort be made to secure the Unification of the Profession."

Mr. H. T. BUCKLAND [F.], President Birmingham Architectural Association: Mr. President and gentlemen,—As one of the members of the original Unification Committee, and as one who is responsible for one of the four resolutions which were before you as recommended by the Institute Council, I would like to ask a few questions and propose an amendment to the resolution which has been proposed by Mr. Cross and seconded by Mr. Hubbard. First, might I ask Mr. Cross and Mr. Hubbard what would be the result of Registration? I think the reply can be found in the first clause of the resolutions to which they take objection—namely, that it would involve the bringing of all architects in the United Kingdom into membership of the R.I.B.A. or some kindred Association. I cannot see what possible objection—if we feel sure that a Registration Bill cannot go through at the present time, and we do feel sure that it cannot go through—what possible objection there can be to preparing the way, in the best possible manner, to the getting of a Registration Bill through when the proper time arrives. The resolution as proposed, and as we have it before us this evening, dissociates Resolution 1 from the rest of the resolutions to which they are taking exception. I will read the words. It is No. 3: "That the Committee recommends the Royal Institute to draft such alterations to its Charter and Bye-laws as may be necessary to comply with the principles of Scheme A adopted, that is to say, by the Unification and Registration Committee, and to confer with the Council of the Society of Architects as to the conditions of membership." What I maintain is that it is a very disloyal action of a Vice-President and several members of the Council of the Institute to have thought fit, when they knew that the declared policy of the Institute Council and the Unification Committee was in favour of Unification, to promote a campaign directly opposed to it. It seems to me that it is not cricket. If they wished to do this, they certainly should have retired from the positions they held on the Council of the Institute. What they have persistently done is to try to misrepresent the objects of the Unification Committee. If they had been content to argue about the third resolution, I think they would have found the answer to all their arguments in the resolution itself. Neither this meeting nor the Institute has any definite proposals before them as to the terms upon which outside architects have the right to come into the Institute, and until they have those definite proposals before them they are attempting to prejudge the case, a case which has never been stated. I therefore propose to move the following amendment:

"That all the words in the motion proposed by Mr. Cross and seconded by Mr. Hubbard after the word 'that' in the second line be omitted, and the following words substituted: 'In view of the fact that a Committee which represents—'"

Mr. P. M. FRASER [F.]: I rise to a point of order, Sir. That is an impossible proposition; you cannot possibly take it.

Mr. BUCKLAND: I shall refer to the Chairman on that question.

The PRESIDENT: It will be well for the meeting to hear the proposal in the first instance; I am prepared with a ruling on the subject.

Mr. BUCKLAND: "That the words after 'that' be struck out, and the following words substituted: 'In view of the fact that a Committee which represents all sections of the pro-

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fession has been appointed to consider and report upon all questions connected with the Unification and Registration of Architects, this meeting deprecates the public discussion of the various views until the Report of the Committee has been presented, and considers that all suggestions and proposals for carrying out the expressed wishes of the profession should be sent to the Unification Committee for consideration."

Now may I say, gentlemen, that the wording of this resolution is not mine; it is the resolution which has been suggested by a Licentiate of this Institute, and I consider that, for that reason, it has exceptional value. It seems to me—

Mr. P. M. FRASER: I rise again to a point of order: can a non-corporate member of this Institute move a resolution?

The PRESIDENT: No, he cannot. No non-corporate member of this Institute is moving a resolution. Mr. Buckland is moving a resolution suggested by a Licentiate.

Mr. BUCKLAND: I want the meeting to understand clearly what the position is. If we should, at this meeting, pass the resolution which has been proposed, we are going to kill the possibilities of Unification, as far as I can understand them. Therefore, gentlemen, I do want you, when it comes to a question of voting, clearly to have in your minds that all the most excellent work which has been done to further the question of Unification, which is, to my mind, the all-important thing, will be stopped. We all want to act as one common body in the interests of the profession, and if these "quack" architects to whom Mr. Hubbard refers are such terrible fellows, we should be better off if we had them within our body, because then we could control them. Gentlemen, I submit this amendment to you.

The PRESIDENT: As a matter of convenience in public business, I will ask if there is a seconder of that amendment?

Mr. H. A. WELCH [A.]: I propose to second that amendment, Mr. President.

Mr. P. M. FRASER: May I rise now, formally, to ask you if you accept that as an amendment?

The PRESIDENT: There is nothing in the amendment to which I can take exception.

Mr. WELCH: Mr. President and gentlemen, I am pleased to associate my name with that of the proposer of the amendment, because I feel that at the present moment anything which will defer a definite decision by this Institute upon so vital a matter is essential in the interests of the profession. I therefore strongly deprecate, as the amendment says, anything which will bring about a decision of the nature conveyed by the resolution which we are discussing this afternoon. I do so because I feel that either those members of this Institute who are behind this resolution are unaware and are acting in ignorance of the facts, or they cannot be sincere in what they are proposing. I am going to remove the last suggestion at once, because two of them who have spoken, and one who is intimately associated with it, Sydney Perks, are personal friends of mine, and as to their sincerity I have no doubt whatever. So it must be that they are not fully conversant with the subject from the beginning, and it is that which has prompted them to move this resolution this afternoon. You will remember, and those who are too young for that will probably have read, that the last proposals which came before the general body failed to materialise because the details of them were unsatisfactory to the profession. Since the war, however, the general body, by consent if not by definite vote within these walls, has given its consent to a scheme to be worked out by the Council on Unification of the profession. I do not think anyone will argue on that. That having been done, I say at once that to prejudge the question of Unification, which, after all, we are agreed to in principle, at the present time because details are not forthcoming, as they require most mature consideration, is grossly to prejudge the issue. The proposer of the resolution stated, in his first remarks, that this was brought forward to give new life, or new consideration, to a proposal which was lying dormant. Why dor-

mant? As long ago as last May the resolution of the Unification Grand Committee was published in the Architectural Press, and therefore it is assumed that every member in this room knew the proposal as it was generally outlined in that unanimous decision. It states there that the Council of the R.I.B.A. shall consider the matter in order to bring before the general body the details necessary in the alteration of its Charter for the purpose of making a concrete proposal. You have agreed to the principle of Unification as such, and there has been no dissentient voice on this proposal until recently a red herring was drawn across the track. The present proposal is to make the whole issue dormant; it is to kill it. How can you proceed on these lines if you accept a resolution suggesting another scheme the details of which you have not indicated? Do you think that is fair and proper? Do not prejudice the issue; wait until the proposals are before you, and then, as sound Britishers, look at them from a constitutional point of view and say, if you will, they are not good enough, that you will not have them. We are told, amongst other things, that if we adopt a scheme of Registration which will bring into the profession, into the Institute, the majority of men who are not at present in it, we shall seriously endanger the prestige of the Royal Institute of British Architects. Let us see where we are. We are going to lower the prestige of the Institute if we bring in a number of men from outside, by whatever name we like to call them; yet these proposers of the resolution have the effrontery to look up and tell you, in the next breath, that if you have Registration before Unification there is no objection whatever to bringing them all in. You have many men in the country who are practising architecture and are not allied with or attached to the Institute or to the Society of Architects; and if you ask them to come in, if you offer them sufficiently generous terms, you will get the amalgamation immediately of the Society of Architects, and, therefore, the title "M.S.A." immediately becomes extinct. The next move will be that all these men whom you are going to bring into the Institute, under some title or other, will be definitely and actively associated with the Royal Institute, which means that 75 per cent. of the men who are practising architecture throughout the country will have some diploma of the R.I.B.A. after their names. The esteem of the public with regard to architecture will be increased or diminished pretty largely by the amount which you talk architecture to them. If you are going to talk architecture to them through the medium of 75 per cent. of practising architects in the R.I.B.A., I fail to see how we shall lower the prestige of the Institute one iota. But I find no difficulty in seeing how, in public importance, the Institute will go up by leaps and bounds. I have the greatest pleasure in associating my name with everything which will defer a decision upon a subject on which the profession has not sufficient detail accurately to form an opinion.

The PRESIDENT: May I remind you that we have a motion, and an amendment, and it will simplify matters if those who rise to speak will state whether they are supporting or opposing either of the motions in question; because in the natural course of events the amendment will be put first, and, if lost, the original motion.

Mr. W. WOODWARD [F.]: I rise with very much pleasure indeed to support the resolution which has been proposed by my friend Mr. Cross, and supported by Mr. Hubbard. Judging by the number at this meeting, and judging by the differences of opinion which have been expressed, I am quite sure, Mr. President, it is evident to the profession at large that this is a subject worthy of sincere and careful consideration. There are observations which have fallen from Mr. Buckland, and observations which have fallen from Mr. Welch, which make me not sure whether I am entitled to speak at all, because many years ago I was a member of the Council of this Institute! The great point which has operated upon my mind is that if these proposals of the Council of the Institute are adopted, it will, in my opinion, absolutely lower the status and dignity of the

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architectural profession. Why? Because the word "all" is inserted in the proposals of the Council. So we come to this: "All architects," including men who call themselves architects without the slightest reason, without examination, without the slightest status, are to come into the fold of the Royal Institute. Another thing about the Council's proposals is that they are, in my opinion, bare, bald, and bold. I have to give you my reasons for using those terms. No indication whatever has been given to us by the Council as to the qualifications they are going to require for admittance to this general body; they have never given us a single word as to the qualifications. We are left completely in the dark as to the qualifications which the Council consider necessary for admitting the members they suggest to membership.

Mr. WELCH: That is why you cannot judge the proposals.

Mr. WOODWARD: My main point is that if the suggestions of the Council are adopted, you will, in my opinion, lower the prestige of the Royal Institute. And this is a very unfortunate period to raise this question, as the architectural profession is not, as it happens, in complete favour at present; and if the public know that you are asking all members to come in, they will say: "Quite right, but not before Registration; when you have got Registration, bring them in." I hope that some day you will have in the whole of the members of the Society of Architects. You do not want a Registration Bill for that; why not adopt that?

Mr. SYDNEY PERKS: I should like to put Mr. Welch's mind at rest on one point. This Committee is doing excellent work, and they are trying to arrange terms of admission. We do not want to stop them. When they come to a decision as to the terms, these will be embodied in the Bill. We are not stopping their work, nor saying anything against their work. We want Registration first; that is the point. We do not quarrel with anything Mr. Welch has done. Of course everybody has read the resolution on the front of the JOURNAL in red ink. I inquired in the office here if they had had any letters, and they have had 170 letters and telegrams approving it from all parts of the country. And how many do you think they have had against it? None at all. That is the very greatest argument that could be put forward in favour of this resolution to-day. Now, I am sorry to have to say anything about the Associates' Committee, but Mr. Keen has read out certain things, and I am going to fall foul of the whole lot of them, excepting one. "This Committee"—that is, the Associates' Committee—"has ample evidence that, although there are differences of opinion as to details, the great majority of Associates are in favour of Unification, whether or not Registration is immediately obtained." I challenge them to produce it.

Mr. WELCH: I might as well deal with that now; it would be a pity for the meeting to be under a misapprehension.

The PRESIDENT: I think it would be better to wait.

Mr. PERKS: There are 2,140 Associates, and we are told that they are absolutely sure that over 1,070 Associates are pledged to this Unification, whether we get Registration or not. I challenge them to prove it. I leave out Liverpool. Early in November an Associate in Manchester wrote to me and said Mr. Stanley Hamp recently addressed the Manchester Society and explained the proposals of his Committee; unfortunately, the meeting was very small, too small to be a representative meeting of the local Associates. Then we go to Newcastle, and I do find fault with this. Here we have, in November, this resolution which was read out to you passed. I suppose they did not know it, but on 20 December the Northern Architectural Association passed this resolution: "That this Association is only in favour of a Unification Scheme as now understood provided that Registration is obtained or assured by Charter or by legislation"; absolutely contradicting this little meeting before. And now as to the date. If they were passed at that date, I am not surprised, because they had no professional opinion, they had no Parliamentary Agents' opinion, to guide them. I

have had a resolution sent up from one man, representing architects in the Wakefield district, and from a representative of the Ulster Society who is on the Unification Committee, who offers to help if funds are required to further this Registration scheme. A member of the Exeter Architectural Society wrote: "Please add me to your Committee. I am very glad the matter is being taken up by a strong Committee." And other letters have been received. You all know what we have done, gentlemen. We wrote letters to the Press contradicting certain statements and giving our views, and something like 120 men joined us. We have now the support of over 350 men—it is difficult to give the numbers because they write representing others. It is 350 to 400 men in favour of this proposal, men who object to that scheme, however you define it. You have had the circular; we sent out 2,700 of those circulars; we sent to every Associate in England, Scotland and Wales, and we did not have one letter stating that the men disapproved of it. If people want to alter the constitution of the Institute—because that is the proposal—they should give a reason for doing it; it is not for us to give reasons why they should not. I do not exaggerate; I say we were led to believe that if you admit these men—either wholesale or partly wholesale, if you pick certain men—you will get Registration. We were told that, and that is what I object to so strongly. The Association to which I belong has taken the finest opinion they could get in London from a Parliamentary Agent, and a copy of this opinion has been sent round to members. I think you will like to hear a little of what happened about this. Two or three years ago the Surveyors' Institution and the Institution of Civil Engineers agreed that Registration was desirable, but practically impossible to obtain. The authorities at Westminster said to the Engineers: "You will never get Registration unless you can make out a public case," and they would not allow them to promote a Bill to amend their charter because they had no public case. The Parliamentary Agent says: "You architects have not a public case; the public is protected. If you can go to Parliament and say houses are falling down because they are not properly built, that sanitation is bad and people are losing their lives in consequence, you have a good public case; but the public interest in this matter is entirely looked after by Building Acts and the Public Health Acts." Sir Reginald Blomfield told us in 1912, and Sir Aston Webb in 1914: "You want it, but you cannot get it." The present Council of the Institute, to which I belong, has passed no resolution in favour of it. We had a legacy from the last Council by a majority, but I fail to see why, because the Council has passed a resolution at one time, they should feel in honour bound to go on with it if they do not approve of it. The men who advocate this Unification scheme say you will make a great sacrifice: it will lower the Institute, but only for a time. Other men talk about progress. Good heavens! It is the most retrograde idea which has ever been put before this Institute. All this happened thirty years ago, before the Examination system was operative. The Institute said: "You can qualify by a certain date, but if you don't come in by then you must come in by examination." And then you were told that examinations had come and we would build up the Institute, and it has been built up by examinations, and any lowering of the Institute will damage the Institute. I find fault with calling this scheme Unification. We have got 400 men against it, and that is good enough. [Mr. BUCKLAND: Out of 8,000.] The Americans have a scheme for Registration, but they do not admit men before they have passed the examination. They have a law that men can be admitted when the Bill is passed, just as in the case of the dentists. Examination is the foundation of the great and unique position we have got to-day, and no man ought to be admitted without. There is a danger that we may not vote on what we have come here to-night to vote on. I don't care which way the vote goes; I particularly want to see the numbers, one way or the other, on this scheme. It will be very useful to us later on, because I think every man should have

a chance of voting. But let us vote on the main thing to-night.

The PRESIDENT: Mr. Perks, just to clear up one point. In your interesting speech you made allusion to the number of letters which had been received—170, I think?

Mr. PERKS: Yes, 169 letters and one telegram, making 170.

The PRESIDENT: Thank you. I have in my hand a circular, undated, which apparently went out recently to members, and which concludes "Should you be unable to attend, you are requested to write at once to the Secretary of the R.I.B.A." etc. Was that sent to all members of the Institute?

Mr. PERKS: No, only to members of the League.

The PRESIDENT: You remarked, with surprise, that no letters had been received against?

Mr. PERKS: But the other circular went to over 3,000 men.

Mr. WELCH: I have got to clear up a point, Sir.

The PRESIDENT: Be brief, please.

Mr. WELCH: I regret Mr. Stanley Hamp, who is the Chairman of the Associates' Committee, is away; his health has been bad of late, and as I am Vice-Chairman of that Committee I feel it my duty to reply to Mr. Perks. We say: "The Committee has ample evidence that, although there are differences of opinion as to details, the great majority of Associates are in favour of Unification, whether or not Registration is immediately obtained." That is challenged by Mr. Perks, and I feel that it is well to know upon what information the Committee bases its conclusions. They are these. Having drawn up certain proposals, we, in conjunction with the Allied Societies, arranged that members of the Associates' Committee should go into the Provinces and explain to the Associates in the Provinces the conclusions which the Associates' Committee arrived at in considering the details of Unification. You will see that at Liverpool, Manchester and Newcastle, which are particularly mentioned, and also at Bristol and at Cardiff, meetings were held. We have also had, in this room, a meeting of the London and Home Counties Associates, and we have obtained a vote at each of those meetings which has shown us an overwhelming majority of those present in our favour; the number against us was negligible, except at the final meeting, when out of a number approaching 200, 27 voted against. If Mr. Perks can tell me of a better method of constitutional procedure, I will pledge myself, as a member of the Associates' Committee, to follow it. The opinion now will be taken of those who are here, not of those who cannot turn up.

Mr. FRANK WOODWARD [A.]: In rising to support the motion, Sir, I would like to call attention to one aspect which I have not heard fully considered. Mr. Perks has answered Mr. Welch as regards the reasons why we agree to accept Unification. But I want to assume that Registration has no chance of going through, and will not go through. If under those conditions you attempt Unification, what do you find? Mr. Welch has twitted us with being willing to argue about this without knowing the exact details as to the process by which outside members are to be admitted under Unification. They must be admitted by examination as strict as those which now apply, or else by examinations less strict, or, thirdly, by no examination at all. If you undertake Unification now, you will, in a short time, deal with the outside members who are now acting architects. But what about those who are growing up and who year by year will arrive at a time when they will be eligible, or not, to come into the Institute? With Registration everybody within the Institute walls will have a diploma, and those who wish to come within the Institute walls will have to undergo an examination as strict as may be decided upon. If you are going to have a method of entrance into the Institute under Unification less strict than the one now in force, no young student will have any incentive to work up to the standard required to pass the present examinations. If Registration is not possible—and we do not know that it is not—I feel that Unification would lead us very far from the goal which we wish to reach.

Mr. W. HENRY WHITE [F.]: May I ask what will be the effect upon the Committee which is considering and, presumably, is to report to the Council on this question of this meeting's voting? First, supposing the resolution is carried, would that not stop the Committee which is working upon it?

Mr. ARTHUR KEEN: The carrying of the resolution must absolutely stop the whole thing, Mr. White, as far as I can see.

Mr. WHITE: I think every member voting ought to realise the enormous work which is being put into this matter. If the resolution is carried, it is entirely a set-back. Therefore I welcome Mr. Buckland's amendment, because if this meeting could see its way to wait until the definite Report of the duly appointed Committee had been presented to the Council, then you would have the advantage of knowing the Committee's views.

The PRESIDENT: I want to remind you that we have here some gentlemen who come from outside London, and who have come at some inconvenience. If those gentlemen are anxious to go and are wishful first to address us on either side of the question, I think the courtesy of the meeting will be with them.

Mr. GILBERT FRASER [F.], President Liverpool Architectural Society: Mr. Sydney Perks has referred to the resolution passed by the Associates of Liverpool, Manchester and Newcastle. Probably most of the Provincial members here to-night who come from Liverpool were at the Liverpool meeting, which was a very representative meeting of Associates. Mr. Stanley Hamp explained the policy of the Council, and I should be very sorry indeed to have to go back to Liverpool to say that the Council of the Royal Institute have entirely changed their policy.

Mr. G. C. LAWRENCE [A.], President Bristol Society of Architects: I am extremely anxious to speak in support of the amendment. I am an Associate of the Royal Institute of British Architects, and have been for twenty years, and I have been extremely proud of it; in fact, so proud that when, occasionally, I have been asked to become a Fellow, as I have been, I have refused. I say that because it is important that I should say it. I see there are here to-night many Associates who are not in the habit of coming to these meetings; I have not been in the habit of coming to them myself. I was called up here last May to what impressed me as a great and glorious meeting; and at that meeting we considered a proposal which seemed to me to be a very great proposal; and that was, by some means, by hook or by crook, but by proper means, we should endeavour to get Unification of architects throughout the Kingdom. It is a glorious ideal, Sir, and I subscribe to it with all my heart. Since that time there has been going on continuously in the Royal Institute much work in the way of exploring how to arrive at a wise and sane scheme. I am engaged on it now. What I ask you to do to-night is to allow me and the other members of the Committee to go on with our work and see if we cannot find a solution of the problem which will unite architects and will make them a stronger and a better body than they are now.

Mr. C. B. FLOCKTON [F.], President Sheffield, S. Yorks, and District Society of Architects: The difference between the two camps is very acute, but it seems to be a very simple one; it turns on the question whether the sweeping-in process should take place before Registration or after. It seems to me that it should be possible, in some way or other, to get over that difficulty. We are all in favour of Unification. I think we are all of us in favour of Registration, if we can get it. If the Institute comes to us and says "We have obtained, or we can obtain, Registration if we admit all and sundry, qualified or unqualified," I do not think there will be a word of opposition to it. But I do feel, very strongly, that we are being asked now to admit everybody without knowing that there is any finality to it. We were told years ago that nobody would be admitted without examination. That went by the board. We are not

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even told now that if we admit all and sundry at the present moment, we shall not be asked to do it again in two years, three years, five years' time. The point I have in my mind is that I should like to find some means of proceeding with the scheme, on the understanding that the degradation, if I may use that term, of the Institute shall not take place until there is a reasonable possibility or probability of obtaining a Registration Act.

Mr. MORRIS THOMPSON [A.], Doncaster: We in the Provinces are faced by peculiar difficulties of our own: we are up against the competition of men who are absolutely unqualified, yet men who are recognised by the public as architects; and we feel that the policy as enunciated by the Council distinctly states that all architects shall be brought into the Institute. We feel that the class they are going to be brought into is the Associate class, the class which has had to put in the hard grind of examination. We strongly object to that; I think I can speak for others besides myself. As an example, in my own town I could show you the office window of one of our rivals; you find on it "So and So, Architects and Surveyors, Estate Agents, Valuers, Coal Merchants, and Carting Agents." Those gentlemen are recognised in a provincial town as architects; are the Council proposing to admit them as Associates of the R.I.B.A.? If they are not going to be admitted as Associates, we should like to know how they are going to be admitted. I have very much pleasure in supporting the resolution.

Mr. C. W. LONG [F.], Cambridge: I take advantage of your privilege as a Provincial member because this is a question which more nearly affects the Provincial member than it does the London member. The London member in the usual type of practice has only to fear the competition of a worthy rival. The last speaker referred to a type of man who, whether you like it or not, under a Registration Bill is bound to come in. I have not heard from any member of the Institute Council what assurance we have that that Registration Bill will be a fact in 10 years, 20 years, 50 years from now. The only reference I have seen to a parallel instance is in the pamphlet which Messrs. Cross and Hubbard sent out to most members, where they quote the Dentists' Bill; and the Dentists' Bill was an Act which you can drive a cart and horse through. A parallel case we can take as an example is that of the Chartered Accountants. Chartered Accountants number about 90 per cent. of the profession of accountants; the remaining 10 per cent. are not registered in that body. And you may safely say that 90 per cent. of accountants' work goes to members of that body. They tried for a Registration Bill, and they have not got it, but every year they go on the principle of sending into Parliament a Registration Bill of their own; though I do not think there is the slightest chance of its ever becoming law. Nobody in this room is averse to Registration: I believe we are all in favour of it; but I object strongly to the thought of admitting everybody to membership of this Institute without seeing the slightest chance of our getting Registration.

Mr. A. W. HENNINGS [F.], President Manchester Society of Architects: Mr. Perks made a point of the meeting of the Manchester Associates being a small one. I think it is not a fair point. Every Associate who was a member of the Manchester Society was circularised and invited to the meeting to hear Mr. Hamp. Those who did not take the trouble to come have no business to condemn the meeting and say it was only a small one. If the resolution which has been proposed by Mr. Cross and seconded by Mr. Hubbard is passed, I do not see how any member of the Committee could be expected to put his back into the work and go on in his efforts to find some scheme by which this may be brought about. I support the amendment.

A MEMBER: As an old member of the Institute—I think I was qualified by examination in 1888—I would like to say a word. I have listened with the utmost pleasure to both the proposer and the seconder of the resolution, and also to the speeches of the proposer and seconder of the amendment. At

this late hour I suggest that the proposers of the amendment will agree to take a straight vote on the resolution.

Sir BANISTER FLETCHER [F.]: I would like to support the amendment. The Council have this matter in hand, and when they have got it finished, with the help of the Associates, in a few months' time, they will, I presume, call the general body of members of the Royal Institute together, and take their opinion on it. That is the straight way of doing it. I am surprised that there are Vice-Presidents and members of the Council who are endeavouring to hoodwink the great majority of the members by drawing up this extraordinary resolution which has been put before us to-night. It is a premature resolution, it is a wrecking resolution. You may say what you like, but no member who is working on the Council for this thing will go on with it if this resolution is carried to-night. There is no concrete resolution before you; therefore how can you vote on it? Not only you, but every member of the Royal Institute, will have the means to vote on this measure when it is put forward in a concrete form, when it is printed, and every man will have a chance of voting. We must thank the Associates. I think that that body, who are those most likely to suffer in this business, have done a remarkable public work in supporting, to a certain point, the work which has been carried out. Therefore I cordially support the amendment.

Mr. WARREN: I have only one point to make, and that is strongly in favour of the amendment. It means that a scheme of Unification is to be embodied in a Bill; and if the Bill becomes an Act, you will then lose the opportunity, without extreme difficulty, of making those necessary small alterations and improvements in your Unification scheme which every human arrangement of this kind is subject to. You will have to get another Bill, and you can understand what loss and expense that would mean.

Mr. HIORNS: We object to the suggestion embodied in the resolution accepted by the Council that all architects in the United Kingdom should be brought into this Institute. It is perfectly clear that the resolution is directed against a policy of that sort, unless we can guarantee that eventually we shall pass a Registration Bill. In thinking of this question I like to remember that this Institute represents a very great tradition. We can go back for 88 years and remember that the architects of that time met together and passed a resolution to evolve an Institution which would uphold the character and improve the attainments of architects; and during the 88 years which have passed since then the many distinguished architects who have succeeded one another in the management of this Institute have all worked their hardest and best in order to ensure that the members of this Institute would represent all that was finest and best in the architect. And, in pursuit of that policy, forty years ago they evolved the examinations whereby we gained our Associates. I think there is no question that it has done a very great deal to ensure the respect in which this Institute is now held. I beg that members generally will support the very clear proposal which is now before us.

The PRESIDENT: I gather that you are anxious to divide. It was my distinct intention to say nothing at this meeting. If I say something now, I am sure you will not misunderstand what I say. I am your Chairman here; I am the Speaker of this little House of Commons, and I am not taking sides. I have one word to say. There have been misunderstandings in this meeting, various misunderstandings, and I want, before all things, that this Institute should know its mind, and should speak its real mind. It is for that reason I suggest that the path of wisdom is in the direction of accepting the amendment. I am not speaking, in the very least, as a partisan. I only say that for this reason: that those who moved the original motion here, men with a most sincere wish to do their duty to the Institute, are really fighting against the unborn. Let this business come to birth before you criticise it, and let me remind you that the Unification Committee is a vast representative body covering

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the whole profession, and I feel it is our duty to them, as well as to this Institute, that this should go before them for a further expression of their opinion. I do not think this Institute is, at the present moment, ready to declare its full mind on the subject. I am sure you will forgive me for having said those few words.

A MEMBER: Can we have the amendment read?

Mr. KEEN read the amendment:

"That a Committee which represents all sections of the profession having been appointed to consider and report upon all questions connected with the Unification and Registration of Architects, this meeting deprecates the public discussion of the various views until the Report of the Committee has been presented, and considers that all suggestions and proposals for carrying out the expressed wishes of the profession should be sent to the Unification Committee for consideration."

Mr. CROSS: The Committee is not composed exclusively of members of this Institute.

The PRESIDENT: No.

Mr. PERKS: We are referring our matters to bodies whose composition does not constitute members of this Institute.

Mr. WELCH: But the Committee contains members of this Institute, by an overwhelming majority.

The PRESIDENT: Quite right, Mr. Welch. Now, will those who are in favour of the amendment hold up their hands? 80 voted in favour, 118 against.

The PRESIDENT: I now put the motion.

Mr. BAXTER GREIG [A.]: On a point of order; would I be in order in moving a further amendment?

The PRESIDENT: Perfectly in order.

Mr. BAXTER GREIG: I was much impressed by your own advice that such a valuable occasion as this should not be lost, and that certain hard labours that had been performed by an elected Committee should not be made void. I would say that one fact has been but lightly touched upon, and that is the view of the legal fraternity with regard to the possibility of our attaining our desires. I suggest it would be a good thing if the Committee charged with the consideration of this subject were to take a legal opinion before anything further is done. I propose that after the word "that" all the other words in the resolution before the meeting be omitted and that these words be substituted: "That before taking further steps in the matter of the furtherance of Unification, the Council of this Institute obtain the best legal advice and opinion as to the prospects of obtaining an Act of Parliament to secure the objects aimed at, and report further to the whole body."

Mr. Greig's amendment was not seconded.

The PRESIDENT: In the absence of a seconder, I now put the motion:

"That this Meeting is of opinion that the conditions for the Unification of the profession should form part of a Registration Bill, and that the present system of admittance to the Institute, including compulsory examination, should continue in force until a Registration Bill be passed."

112 voted in favour, 66 against. The Resolution not having secured the necessary two-thirds majority was lost.

Mr. W. WOODWARD: We ought to thank our President for the very excellent way in which he has conducted the meeting.

It was reported to the Council that at the meeting of the Unification and Registration Committee held on 7 February at the Royal Institute the following resolution was carried by 30 votes to 1:—

"That this meeting of the Unification and Registration Committee reaffirms its resolution of the 12 May 1921—that the principle of Scheme A, namely, the bringing of all Architects in the United Kingdom into membership of the R.I.B.A., be adopted as the basis of Unification."

And it was RESOLVED that the Resolution be approved by the Council of the R.I.B.A.

(As there has been widespread misunderstanding on the subject of the proposals for the unification and registration of the architectural profession which are now being considered by the Associates' Committee and the Unification and Registration Committee, the Council have given instructions that a brief explanatory statement shall be at once prepared and issued to Members.)

THE CONCRETE INSTITUTE.

Mr. E. Fiander Etchells, President of the Concrete Institute, has been appointed an Advisory Member of the Board of Architectural Education.

ROYAL SANITARY INSTITUTE CONGRESS, BOURNEMOUTH, 24-29 JULY 1922.

Mr. H. D. Searles-Wood, Vice-President of the R.I.B.A., and Mr. J. Arthur Smith, F.R.I.B.A., have been appointed to represent the Institute at the above Congress.

EMPIRE FORESTRY ASSOCIATION.

The Royal Institute of British Architects have been elected an Affiliated Member of the Empire Forestry Association. The Secretary of the Association writes:

"My Executive Committee desire me to say that it is sincerely hoped that many individual members of the R.I.B.A. will become members of this Association, and, further, that they will appreciate the importance of the work which the Governing Council have undertaken, and assist in bringing to the notice of the consuming public the valuable properties of timbers which are grown within the Empire."

THE CELEBRATION OF THE 150TH ANNIVERSARY OF THE ACADEMIE ROYALE DE BELGIQUE, 24 MAY 1922.

The following members have been appointed to represent the R.I.B.A. at this celebration:

The President of the Royal Institute.
Sir Reginald Blomfield, R.A., Past-President.
Mr. John W. Simpson, Past-President.
Sir John J. Burnet, A.R.A.

SPECIAL ELECTION TO THE FELLOWSHIP.

Under the provisions of Bye-law 12 the following architects were elected as Fellows by the Council:

The Rt. Hon. Earl Ferrers.
Mr. F. C. Eden.

RETIRED FELLOWSHIP.

Mr. Wm. Bakewell [F.] has been transferred to the Retired Fellowship class.

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THE R.I.B.A. PRIZES AND STUDENTSHIPS.

The Council have adopted the following recommendations of the Board of Architectural Education :

1. That no work submitted shall have been prepared during the competitors' day school hours.
2. That students shall receive no criticism or assistance from their School of Atelier Instructors in making their designs.
3. That a student successful in a Travelling Studentship Competition shall be given personal advice by the Jury of that competition before travelling, and shall be recommended to wait until he has reached the age of 23 years before taking up his Travelling Studentship.
4. That a student successful in a Travelling Studentship Competition be given two-thirds of the money prize before beginning his travels ; the remaining one-third to be handed to him on the satisfactory completion of those travels.
5. That the student successful in the Pugin Travelling Studentship Competition be required to make a tour of six weeks' duration instead of eight weeks.
6. That the student successful in the Henry Jarvis Travelling Studentship Competition be permitted to spend his second year in some country other than Italy or Greece, if he so desires, subject to the approval of the Faculty of Architecture of the British School at Rome.

SOCIÉTÉ DES ARCHITECTES DIPLÔMÉS PAR LE GOUVERNEMENT AND THE ARCHITECTURAL ASSOCIATION

Mr. Arthur J. Davis [F.], the Hon. Secretary of the Franco-British Union of Architects, has been informed that the S.A.D.G. at their last Council meeting decided to place at the disposition of the Council of the Architectural Association a grand medal of the S.A.D.G. to be presented to the best student (man or woman) who has received the diploma of the A.A. School.

EXHIBITION OF ARCHITECTS' WORKING DRAWINGS.

An Exhibition of Architects' Working Drawings has been opened in the Galleries of the Institute, and will remain open until 18 March between the hours of 10 a.m. and 5 p.m. daily (Saturdays 10 a.m. to 1 p.m.). The exhibition includes drawings kindly lent by Sir John Burnet, A.R.A. (the British Museum Extension), Mr. Arthur J. Davis (the *Morning Post* building), and Mr. Ralph Knott (the London County Hall). The exhibition is intended primarily for students of architecture : they will be able to examine the drawings which a practising architect hands to a contractor, and thus will be afforded an insight into the methods adopted in a modern architect's office.

THE ROYAL GOLD MEDAL, 1922.

A Special General Meeting will be held on Monday 6 March 1922, at 8 p.m., for the following purpose :—

To elect the Royal Gold Medallist for the current year. The Chairman to move : " That, subject to His Majesty's gracious sanction, the Royal Gold Medal for the promotion of Architecture be presented this year to Mr. Thomas Hastings of New York, in recognition of the merit of his work as an architect."

BUSINESS MEETING, 6 MARCH.

The Ninth General Meeting (Business) of the Session 1921-22 will be held on Monday, 6 March 1922, immediately following the above Special Meeting, for the following purposes :—

To read the Minutes of the meeting held on 20 February ; formally to admit members attending for the first time.

To proceed with the election of the candidates for membership, whose names were published in the JOURNAL for 11 February 1922—viz., for Fellowship, 6 ; for Associateship, 88.

HIGHER BUILDINGS FOR LONDON.

Under the provisions of Bye-law 61 the following notices of motion have been received by the Secretary :—

That this General Meeting of the Royal Institute of British Architects approves the action taken by the Council in connection with the Report of the London Building Acts Committee.

To be moved by Mr. Maurice E. Webb [F.] and seconded by Mr. Raymond Unwin [F.].

That this meeting approves the general principle of allowing buildings to be erected, in certain positions, to a greater height than is the present practice, subject to proper safeguards as to construction, fire escape and fire attack.

To be moved by Mr. Delissa Joseph [F.] and seconded by Mr. H. Austen Hall [F.].

MR. JOSIAH GUNTON [F.] CHIEF COMMONER.

Mr. Josiah Gunton [F.] has recently been elected the chairman of the City Lands Committee, the premier committee of the Corporation of the City of London, and in virtue of this office becomes Chief Commoner.

INDUSTRIAL COUNCIL FOR BRITISH INDUSTRIES.

Mr. George Hubbard [F.] has been appointed a member of the Administrative Council of the Industrial Council for British Industries as representative of the Institute.

Obituary

MR. SIDNEY JOHN DICKSEE.

The news of the death of Mr. Dicksee on 8 February, at the age of sixty-six, has been received with very deep regret by architects who were professionally associated with him and by his many friends. Mr. Dicksee was the managing director of the well-known firm of building contractors, Messrs. Foster and Dicksee, and the brother of Mr. Frank Dicksee, R.A., and Mr. Bernard J. Dicksee [A.], the District Surveyor for Southwark.

Mr. Mervyn Macartney [F.] writes as follows :

" It has been my privilege to have had the intimate friendship of the late Sidney J. Dicksee for over forty years. During the whole of that time I never had the slightest dispute or disagreement with him either in business or general matters. He was always the same courteous gentleman, whatever the subject of discussion might be. At the same time he was quite able and determined to ' keep up his end ' of any controversy or dispute. He was, moreover, a great builder, and one of the first to introduce steam lorries, diamond stone cutters, Scotch cranes, etc., in carrying out his works ; in fact, all the modern methods of building which now are no longer innovations.

" He must have impressed the Office of Works with his ability and integrity or else he would not have been entrusted by them with so much Government work. King's College Hospital at Denmark Hill is another important work which redounds to his credit as a contractor. He lived a very strenuous life, and it was the prodigal way in which he expended his health by night work and robbery of sleep that of late years undermined his constitution and shortened his days. Although he did not actually attempt to make drawings, he was very capable of sketching his ideas on paper and had much taste in pictorial matters.

" Dicksee's word was his bond, and you required nothing more to satisfy you that all would be carried out as agreed. I have lost a great friend and the building world a very eminent member of that confraternity."

Mr. A. B. Pite has sent the following communication :

" I should like to be allowed to add a small tribute to the memory of the late Sidney J. Dicksee, to his genius for friendship and labour, and the great qualities for construction and organisation with which he was so richly endowed. His untimely death is a sorrow and grief to all who were privileged to enjoy his acquaintance. Mr. Dicksee was indeed a peer among the members of his noble craft. He seemed to me to lift the mere materialistic idea of building to a higher plane. His infectious enthusiasm inspired all around him ; and he was greatly esteemed by his whole staff, who could rely with confidence on his ability to perform whatever had been undertaken, whether the end was to prove advantageous to his firm or otherwise. In this the uniformly high character of the firm's work was consistently maintained. I am sure there are many who will acknowledge the remarkable and inspiring influence that he exercised upon the architect with whom he was—well, collaborating : there is no other word to express it. Full of stimulating suggestions, he would tackle any problem immediately, and indicate his ideas by means of tactful and elucidating sketches."

Competitions

WOLVERHAMPTON WAR MEMORIAL.

In the competition in connection with the above memorial the following are those to whom the Assessor (Mr. John W. Simpson, P.R.I.B.A.) has awarded Premiums :—

FIRST PREMIUM of 150 guineas to—

Mr. C. T. ARMSTRONG, A.R.I.B.A.,
32 Eversley Road, Bexhill.

SECOND PREMIUM of 100 guineas to—

Messrs. EBBS AND WARREN, A.A.R.I.B.A.,
Stamford Bridge Studios, Chelsea.

THIRD PREMIUM of 50 guineas to—

Mr. WILFRID BOND, F.R.I.B.A.,
11 Elmer Road, Grantham.

" HONOURABLE MENTION "—

Major HUGH C. CORLETTE,
Lincoln's Inn, London, W.C.
Messrs. T. RIDGE AND R. E. HAYNES
(Shayler & Ridge),
The Cross, Oswestry.

AUCKLAND WAR MEMORIAL COMPETITION.

The promoters of this competition have asked the Royal Institute of British Architects to form a Register of intending competitors, so that information received from Auckland may be distributed to the competitors without loss of time.

I shall be glad if all architects who intend to take part in this competition will send me their names and addresses as soon as possible.

The date for receiving drawings in this competition has been extended to 30 June 1922.

IAN MACALISTER,
Secretary.

The " Answers to Questions " relating to the Auckland War Memorial Competition have been received by the R.I.B.A. from New Zealand. Duplicated copies can be obtained by competitors on application to the Secretary, R.I.B.A.

TRUJILLO COMPETITION.

The Competitions Committee of the Royal Institute of British Architects desire to inform members that as the above Competition appears to be intended rather for sculptors than for architects, the Committee's warning notice has been withdrawn.

COMPETITIONS OPEN.

Auckland War Memorial.
R.I.B.A. Colour Competition.
Dundee War Memorial.

The conditions and other documents relating to the above competitions may be consulted in the Library.

Students R.I.B.A.

The following candidates, having passed satisfactorily through the architectural courses at the "recognised" schools indicated against their names, have been registered as "Students R.I.B.A." The asterisk (*) denotes students exempted from the Intermediate Examination under the Special War Concession to Probationers.

- ARTHUR : ERIC ROSS (Liverpool University), 6 Peterborough Road, Wavertree, Liverpool.
 BEAUMONT : JOHN SOMERVILLE (Victoria University, Manchester), 24 Brazennose Street, Manchester.
 BUTLER : BERTRAM (Liverpool University), 31 Priory Street, Dudley.
 CHATTERLEY : ARTHUR OLIVER (Liverpool University), 73 Oriol Road, Bootle, Liverpool.
 COGSWELL : VICTOR GORDON (London University), Sunnicote, London Road, North End, Portsmouth.
 COOKE : EDITH GILLIAN (Architectural Association), 18 Airlie Gardens, W.8.
 EDMUNDS : EDWYN EMRYS (London University), "Cartre Clyd," Cradock Street, Swansea.
 ELIJAH : SAMSON ABRAHAM, 2 Jail Road North, Bombay (9), India.
 GIMSON : HUMPHREY MORLEY (London University), 713 Aylestone Road, Leicester.
 HARVEY : JOHN DEAN MONROE (London University), 42 Castelnau Mansions, S.W.13.
 *HELBING : VERNON ADOLPHUS JOE, 184 Altmore Avenue, East Ham, E.6.
 HIRST : HAROLD (Liverpool University), 93 Hale Road, Walton, Liverpool.
 HUGHES : ELEANOR KATHERINE DOROTHY (Architectural Association), c/o The Architectural Association, 35 Bedford Square, W.C.1.
 HUTTON : CHALMERS HENRY (Liverpool University), 10 Town Lane, Rock Ferry, Cheshire.
 JENKINS : THOMAS TREVELYAN (Liverpool University), 6 Tennyson Street, Princes Park, Liverpool.
 KHAN : HASANKHAN HAYAT (Sir J. J. School of Art, Bombay), Anjuman-i-Islam High School, Bombay.
 LAW : OLIVER WILLIAM MAFERING (London University), 64 St. Augustine's Avenue, South Croydon.
 MACDONALD : ALISTER GLADSTONE (London University), 9 Howitt Road, N.W.3.
 *MOXON : CECIL HORSFIELD, "Winterbourne," Bretton West, near Wakefield.
 MUSKER : DORIS (Liverpool University), Rest Cottage, Upper Colwyn Bay, N. Wales.
 *NEWTON : FRANK, "Greenhythe," South Avenue, Littleover, Derby.
 PATKER : PURUSHOTTAM MUKUND (London University), 22 Harvey Road, Gaiandevi, Bombay, India.
 *POWELL : WILLIAM THOMAS, 6 Dudley Road, Kilburn, N.W.6.
 PRYNNE : HAROLD FELLOWES (Architectural Association), Secretariat, P.W.D. Chapauk, Madras, India.
 REID : ALEXANDER SIMPSON (Robert Gordon's Technical College, Aberdeen), 221 Clifton Road, Aberdeen.
 RYLE : WINIFRED (Architectural Association), 16 Gordon Square, W.C.
 *SAISE : ALFRED JOHN, 4 Guinea Road, Fishponds, Bristol.
 SCOTLAND : GEORGE BRUCE (Glasgow School of Architecture), 12 Broomknoll Street, Airdrie, Scotland.
 *SEATON : WILLIAM GEORGE, 22 Mackintosh Road, Pontypridd, Glam.
 SHROFF : LOVJI FRAMROZ (London University), 34 Westbourne Road, Barnsbury, N.7.

- WISNER : SEFTON ERNEST ELLARD (Liverpool University), 4 Beckenham Road, New Brighton, Cheshire.
 WILLIAMS : EDWIN (Liverpool University), 201 Edge Lane, Liverpool.
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(Continued in next issue.)

Members' Column

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OFFICES OR PRACTICE required by an established architect and surveyor, preferably in the W.C. district, 3-6 rooms, or house for conversion.—P. H. G., c/o Secretary R.I.B.A., 9 Conduit Street, London, W.1.

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A.R.I.B.A., P.A.S.I., age 29, ex-officer, is desirous of entering into partnership with architect and surveyor. Provinces preferred.—Address Box 10, c/o Secretary R.I.B.A., 9 Conduit Street, W.1.

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A.R.I.B.A. (37). Silver Medallist, "Varsity training, and with first-class qualifications and distinctions, desires senior appointment, preferably of a public nature. Experience in all branches of private and public work, including housing and town planning, steel structures, water supply on large scale, hygiene, streets and sewers, etc.—Address Box 555, c/o Secretary R.I.B.A., 9 Conduit Street, W.1.

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A.R.I.B.A. (first-class London experience) disengaged. Design, details, specifications, general practice. Highest references.—Box No. 1722, c/o Secretary R.I.B.A., 9 Conduit Street, London, W.1.

ASSOCIATE (married, 3 children), having resumed practice after 5 years' war service, is in difficulties, and would be grateful if he might render assistance to other architects at his or their office. Highest class experience and draughtsmanship; also surveying, etc.—Apply Box 737, c/o Secretary R.I.B.A., 9 Conduit Street, W.1.

Minutes XI

SESSION 1921-1922.

At the Eighth General Meeting (Ordinary) of the Session 1921-1922, held on Monday, 20 February 1922, at 8 p.m.—Mr. Paul Waterhouse, President, in the chair. The attendance book was signed by 19 Fellows (including 3 members of the Council), 34 Associates (including 1 member of the Council), 3 Licentiates, and a large number of visitors.

The Minutes of the Seventh Meeting held on 6 February, having been taken as read, were agreed as correct.

The following members, attending for the first time since their election, were formally admitted by the President: H. M. R. Burgess, J. D. Hossack, and C. H. Stableford, Associates.

Mr. Arthur J. Davis [F.], having read a paper entitled "The Internal Decoration of the Ocean Liner," a discussion ensued, and on the motion of Sir Westcott S. Abell, K.B.E., Chief Ship Surveyor, Lloyd's Register, seconded by Mr. J. Annan Bryce, a vote of thanks was passed to Mr. Davis by acclamation, and was briefly responded to.

The proceedings closed at 9.45 p.m.

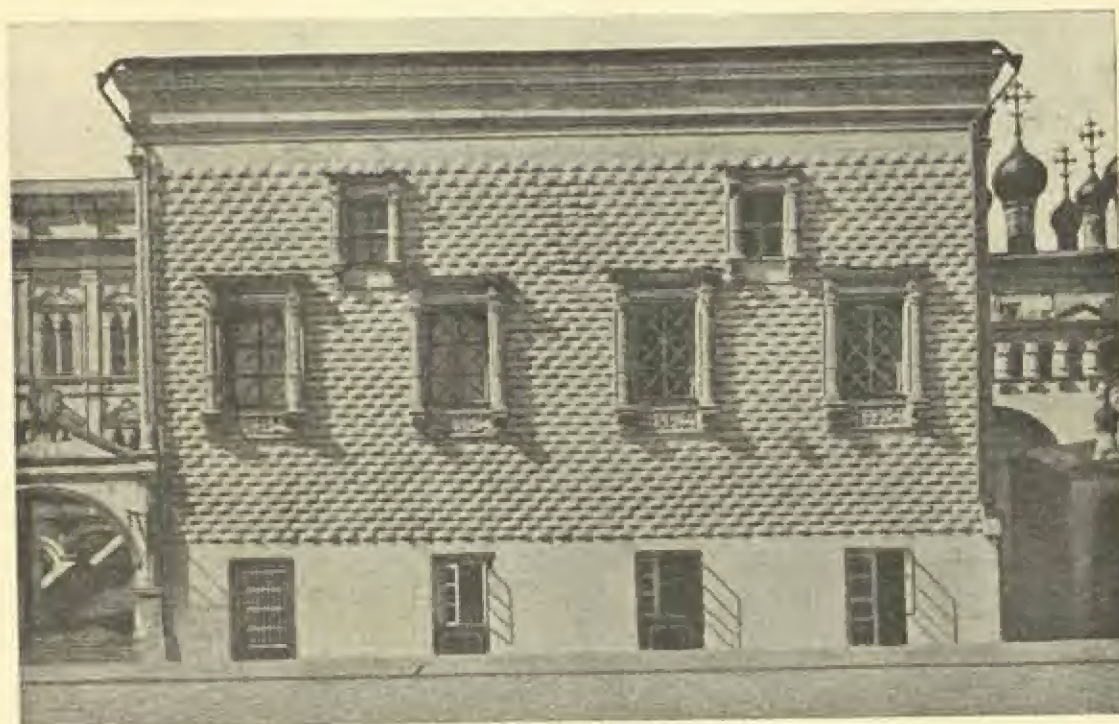


FIG. 3.—MOSCOW—FACETED PALACE

Russian Architecture*

By W. HENRY WARD, M.A. [F.]

THE Russian ballet with the alluring crudities of Bakst staging has been with us these dozen years, Russian music these thirty, and the Russian novel perhaps fifty, but what do we know of Russian art—of Russian architecture, sculpture and painting, or of the minor crafts? So little that but for the gaily coloured wood utensils and embroidered garments of the Mujik and barbarically framed ikons such as are occasionally to be found in our shops, and a vague impression of the semi-oriental churches of the Kremlin, the average man of taste might well ask: "Is there any Russian art to know?" And he might still be asking it after a special course extending from 500 B.C. to the nineteenth century. The jewellery and ceramics of the shores of the Euxine, the mosaics of Kief, the frescoes of Novgorod, the churches of Suzdalia and Muscovy, the Kremlin of the Ivans, the palaces of Peter the Great and Catherine II., would reveal to him a perhaps unsuspected wealth of artistic production in Russia; but he would still need convincing that it was in any real sense Russian and not merely the work of Hellenes, Byzantines, Italians,

Germans, and Frenchmen, to say nothing of Poles, Swedes, Flemings, and Englishmen.

The literature on the subject is not very voluminous, even in Russian, and the information to be derived from much of it is distorted by the eagerness of the writers to prove some thesis of their own. Of the few lines professedly devoted to it by the *Encyclopædia Britannica* one-third consist of a description of a Roumanian(!) church, while the remainder contain at least one more than disputable statement.

One of the earliest works to bring the subject into notice in Western Europe was Viollet-le-Duc's *L'Art Russe* (1877), but this labours under a double disadvantage of insufficient information and tainted sources. For his data were supplied him from Slavophil *milieux* desirous of utilising a distinguished foreign author to buttress their own doctrines that Western art was the enemy and that salvation was only to be found in the native tradition. He was thus led to exaggerate its value, and incidentally to emphasise its supposed Asiatic origins and minimise the relations between Russia and the West. Further, the scope of his book is confined to architecture and ornament.

The work of Monsieur Louis Réau (Henri Laurens,

* *L'Art Russe des Origines à Pierre le Grand*. By Louis Réau, ancien directeur de l'institut français de Petrograde. Paris, 1921. [H. Laurens.]

Paris, 1921) is perhaps the first to deal with the Russian arts as a whole up to the era of Peter the Great, and to do so objectively with the aim of "studying them as an independent organism subjected to certain laws of evolution, constantly modified by the action of social and historical conditions, and in the end shaping themselves to suit these conditions."

The serious archaeological studies, the most valuable outcome—so far as art is concerned—of the nationalist movement of the nineteenth century, have brought to light evidence on all periods and promoted the illustration of extant examples. All this material, which was not available in Viollet-le-Duc's time, has been exhaustively sifted by M. Réau, whose long residence in Russia as director of the French Institute in Petrograd gave him special facilities for studying Russian art at first hand.

He has produced a volume of quite remarkable clarity in exposition and arrangement, containing in a comparatively small compass, yet without any crowding, a large mass of information, accompanied by sound criticism and illustrated by adequate photographs of typical examples. Its only defects are the absence of any plans or other drawings and the lack, too common in French works, of an index.

His general conclusions are that, while the Russians are indebted to an unusual degree to other nations for inspiration and technique in the arts they have practised—so much so that in only one of the five great periods of art in Russia can the native element be said to predominate—yet these borrowings have been so much modified by native taste and local conditions as to produce a distinct and original flavour and results by no means contemptible. He admits, however, that Russia betrays her inferiority to that of any of the great art centres of the world in this point at least, that she has exercised no influence on art abroad, even in other Slavonic lands.

This relative inferiority is by no means surprising. Russia has had many drawbacks to contend with. Her national temperament is spasmodic and averse to sustained effort, brief fits of violent energy soon giving place to long spells of inertia. Her vast monotonous plains, with a climate of alternating extremes of heat and cold, the difficulties of transport and intercourse, the absence of minerals and stone, are conditions unfavourable to the growth of industries and consequently of that city life without which no great art has flourished. Then a series of untoward circumstances, including internecine dissensions and repeated foreign domination, conspired to retard in her the growth of civilisation, which has thus lagged several centuries behind the rest of Europe. In her position outside the Roman Empire and remote from Western life, she received Christianity 500 years and printing a century later than France, and retained many medi-

eval institutions, such as that of serfage, down to the eighteenth or even the nineteenth century, while her secular literature is no older than that of the United States.

Under such conditions we find no continuous national artistic development radiating over the country from one or more centres, but instead we see one school of purely local influence develop in some temporarily favourable centre and die out with the prosperity or political power of that centre, to be succeeded after an interval by another school of equally local influence in another part of the country.

In historical times art first flowered on Russian territory in the Greek colonies which fringed the Black Sea and extended their trading activities up the southern rivers. The relics of this period consist principally of pottery and jeweller's work distinctly Hellenic in inspiration and technique, but often exhibiting a barbaric luxuriance foreign to the Hellenic genius and possibly due to its execution by Scythian craftsmen, while occasionally betraying indications of Persian influence.

The break-up of the Roman Empire is followed by a blank of several centuries. In 862 the incoherent Russian tribes called in Scandinavian help against the nomad Pechenegs. The dynasty of Rurik gave them the germs of political stability; and the baptism of Vladimir, Prince of Kiev, in 988, brought them into the community of Christendom. The eleventh and twelfth centuries were a glorious period in the history of the Russian commonwealth, but its territory was a narrow one, whose prosperity was bound up with the water-borne trade passing from the Black Sea to the Baltic by way of the Dnieper, the Volkhov and the Neva, with only a single transshipment between Constantinople at one end and the Hanse towns at the other. Strung out along the "Road of the Variags," the cities of Kiev, Chernigov, Pskov, Novgorod, grew in wealth and splendour, their merchants voyaging annually to the Bosphorus to barter their furs, wax, and honey for the textiles, ivories, jewellery and other luxuries of "Tsargrad." Their princes were the equals of any European sovereigns. Jaroslav, the Charlemagne of Russia, married his sons to daughters of the Emperor Constantine XII. and of Harold of England, and the kings of Norway, Hungary, and France were his sons-in-law.

Shut off as she was by roadless forests and hostile tribes from the culture centres of the West, and in direct contact with the Eastern Empire at a time when its artistic influence extended from the Caucasus to Poitou and from Visby to Palermo, Russia could hardly have drawn her art, as well as her religion, from any other source. The two are, indeed, most intimately bound up, and nowhere more than in the Orthodox Church has art been so strictly circumscribed by ecclesiastically imposed limitations. Not only was the whole iconography

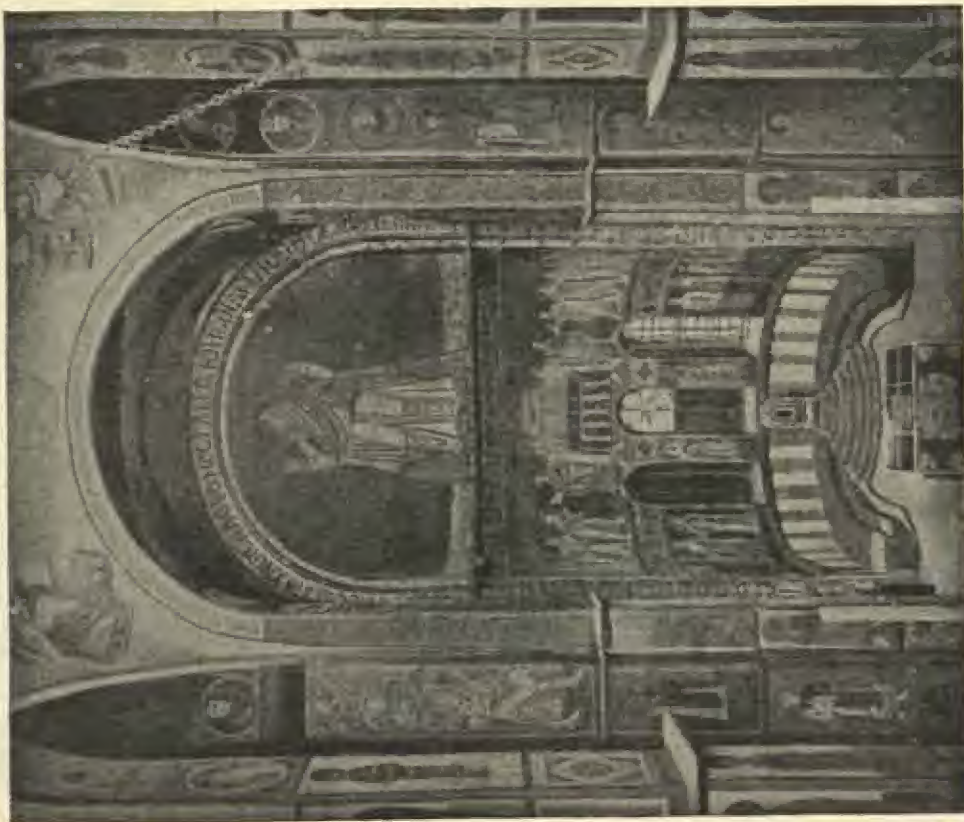


FIG. 1.—ST. SOPHIA OF KIEV

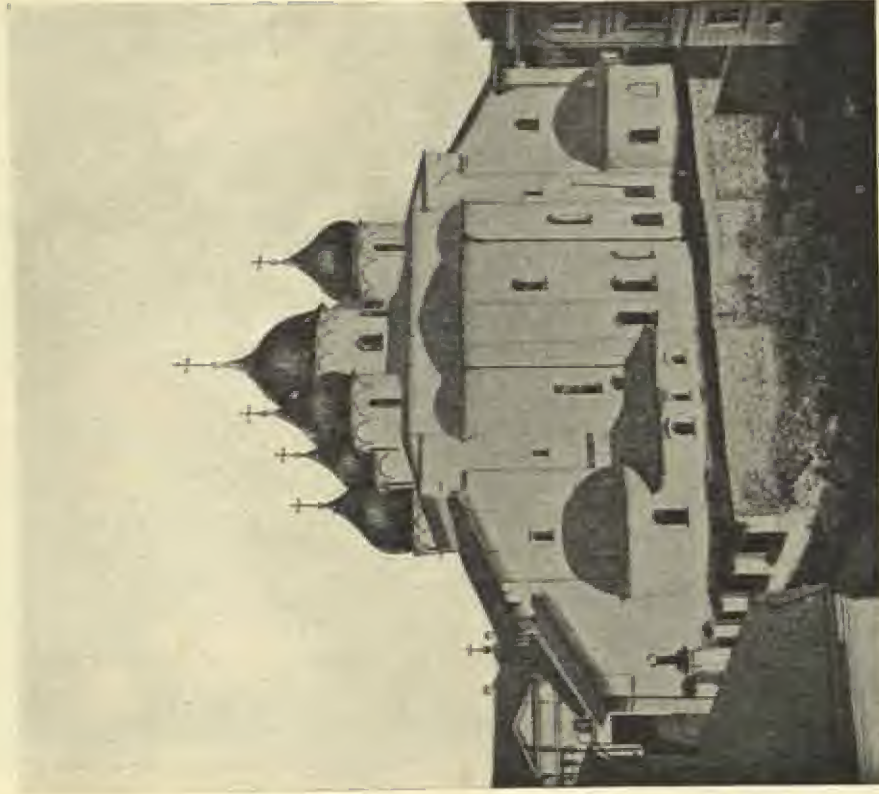


FIG. 2.—ST. SOPHIA OF NOVGOROD

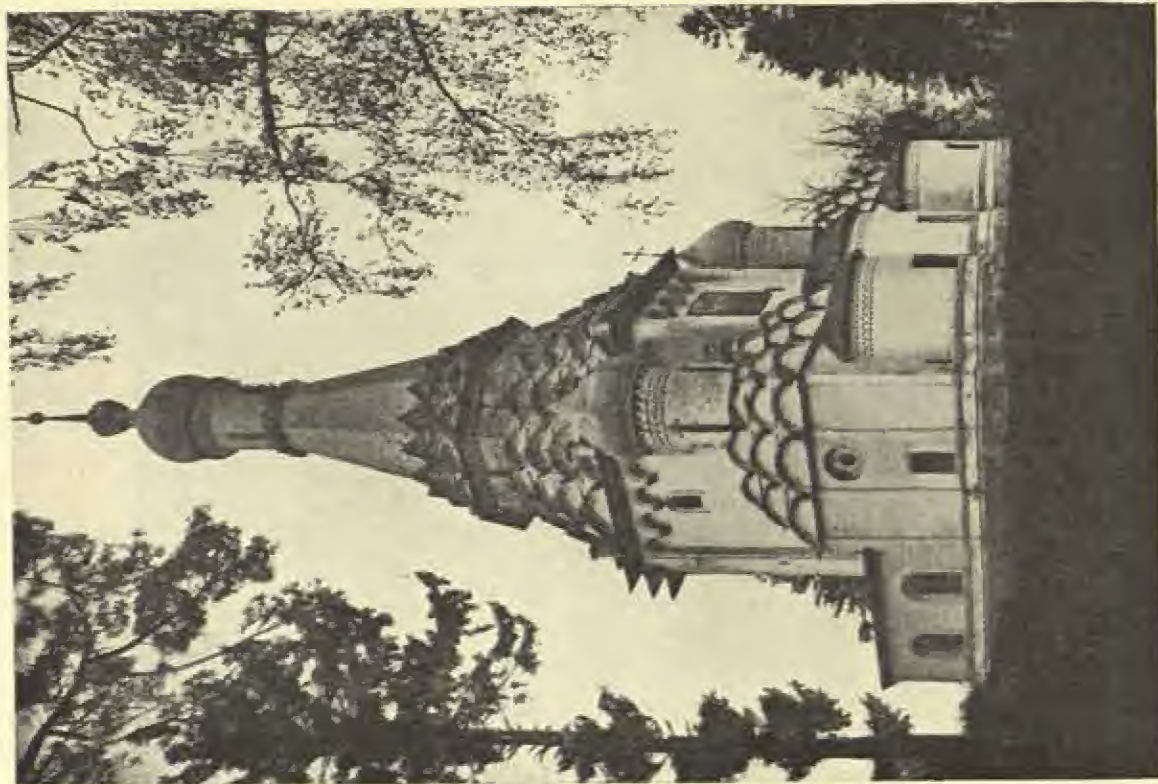


FIG. 5.—OSTROVO—CHURCH OF THE TRANSFIGURATION

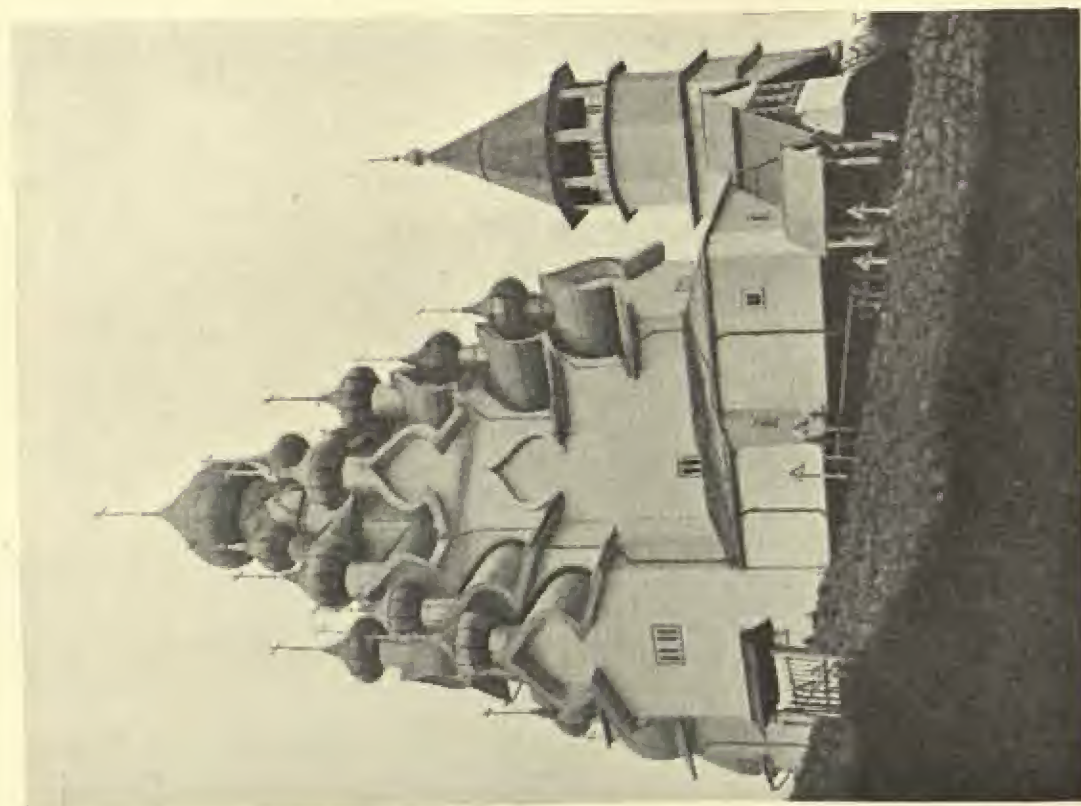


FIG. 4.—CHURCH WITH 21 CUPOULAS—KIJSKI POGOST

subject to immutable rules governing its types of representation, its arrangement within the sacred edifice, and even its colour schemes; not only did the proscription of sculptured images relegate the plastic arts to insignificant position in the decoration of churches, but their plan and even their elevations were severely controlled by minute regulations.

Of the splendours with which the House of Rurik endowed Kief little is left, but that little is sufficient to prove the correctness of the chroniclers who attribute them to Byzantine builders and craftsmen. St. Sophia of Kief (Fig. 1), after frequent restorations and additions, still shows a brick structure covered externally with stucco and internally with a rich robe of marbles and mosaics supplemented with frescoes. Like its contemporaries, St. Mark's of Venice and St. Front of Périgueux, it has a plan based on that not of St. Sophia of Constantinople, but of the Church of the Apostles, though probably indirectly so through Armenian and Georgian examples. The plan of the Greek cross inscribed within a rectangle, with five domes and eastern apses, thus introduced, became the established one for Russia. To this were usually added external galleries on three sides and an outlying bell tower. The elevations were divided by pilaster strips into three bays terminating in arches, the centre higher than the others.

The glory of Kief was short-lived. The empire of the House of Rurik fell to pieces in sanguinary dynastic wars. Power shifted in the twelfth century to Novgorod the Great on the Volkhof, a powerful republic of the Venetian type with a vast colonial empire stretching from the Baltic to the Urals, and a flourishing trade with the Hanse. The prosperity of Novgorod, which had a duration of some three hundred years and succeeded in escaping the Tartar domination, gave rise to a considerable body of architecture. On the whole this is less ambitious than that of Kief; its scale is less, its plans and elevations are simplified, and it does not employ mosaics. But it introduces modifications (Fig. 2). For example, for the flattened spherical domes of the Byzantines it substitutes externally bulbous timber cupolas designed to prevent the lodgment of snow, and raised upon drums pierced with windows—and this fully a century before the advent of the Tartars, to whose importation this form has been attributed. Later on the cupola on domes and towers tends to give place to another form of wood construction, the steeply hipped or pyramidal roof. Other features, such as the introduction of the gable and blind arcading on church fronts, seemed to have come from Germany through the coast towns of Riga and Reval. The characteristics of the Novgorod churches are reproduced in those of its satellite Pskof, which, however, develop peculiarities of their own. Their domes are sometimes covered with coloured glazed tiles, and they elaborate their external galleries and their arcaded bell towers.

The great title to admiration of Novgorodian mediæval architecture is the splendour of its fresco decoration, much of which has been recovered beneath many coats of whitewash since toleration was granted in 1905 to the Old Believers. It exhibits in its fourteenth and fifteenth century examples, under general conformity to the rigid rules of Eastern iconography with its avoidance of realism, an unexpected freedom and beauty in composition and charm in the sympathetic rendering of scenes of sacred history which recall the Italian Primitives. There is, in fact, probably more than an accidental affinity, for while the early Italians were themselves influenced by Byzantium, the later Byzantines had not escaped the Italianisation of the Court of the Palæologi.

Of the subsequent fortunes of painting in fresco and miniature and its decline under Dutch and German influence in the seventeenth century, of the mediæval and subsequent history of the arts of the illuminator and embroiderer, enameller and tile-maker, founder, jeweller, goldsmith, and woodcarver, Monsieur Réau treats fully. But space forbids to follow him into these attractive regions.

After the twelfth century the political centre of Russia begins to shift eastward, by the colonisation of Suzdalia, a region belonging to the Volga basin; and while commercial relations were thus established by that river with Persia and Caucasia, touch was gradually lost with the West, and even the intercourse with Constantinople dwindled in importance. The Tartar domination, which began with the devastation of the Suzdalian cities in the thirteenth century, completed the severance of the budding Russian civilisation from Western influences.

The churches of Suzdalia constitute a definite architectural group. They are, as a rule, even smaller in scale than those of Novgorod, and seldom had more than one cupola. This was the case originally, even in the most splendid example, the Cathedral of the Assumption at Vladimir (1158, rebuilt 1183). Each bay of the elevations usually terminates in an arched gable. But a more important characteristic of the group is that they are stone-built and decorated with carving, for the rudely cut monsters and foliage work in low relief with which their façades are enriched can hardly claim to rank as sculpture.

The Tartars of the Golden Horde, whose incursions began in 1224, ruined Suzdalia, curtailed the empire of Novgorod, completed the decline of Kief, and held the greater part of modern Russia under their sway till near the close of the fifteenth century. This Mongol domination destroyed much and built nothing. It retarded the growth of civilisation for three centuries, but, while leaving traces in social and political institutions, contributed to art and more particularly to architecture nothing but a scarcely definable flavour of Oriental taste.



FIG. 7.—JAROSLAV—CHURCH OF ST. JOHN THE BAPTIST OF TOLTCHIKOVO



FIG. 8.—THE KREMLIN OF ROSTOV

The Princes of Moscow, hitherto an insignificant township lost among the forests, succeeded, by a policy of astute subservience to the Tartar rulers, in taking advantage of the decay of their greater rivals and their own position as intermediaries between the Asiatic markets on the Caspian, the Volga and the Don and those of the White Sea, the Baltic and Poland. They rapidly grew in power till they were able to drive out the Tartars piecemeal, a process completed by 1480. The Eastern Empire had then fallen, and, assisted by a marriage with a Byzantine princess, they claimed the inheritance of its prestige, both political and ecclesiastical.

Thus during the sixteenth century, under Ivan the Great, Basil, and Ivan the Terrible, they completed the subjection of the surrounding Russian states and came once more into contact, hostile or otherwise, with Western Europe.

When a new focus for architectural activity was thus provided by Muscovy, the Italian Renaissance was in the full tide of expansion, and the Muscovite Tsars were among the first foreign sovereigns to engage Italian craftsmen. That the need for such technical assistance was a crying one may be judged by the fact that the art of building otherwise than in timber was completely lost under the Tartars, and that no Muscovite knew how to put up a wall that would not at once collapse. A whole colony of these "Friazines"—or Franks—as the Russians called all Latins, came to the call of the Tsars, among whom the principal, from the architectural point of view, are Ridolfo Fioravanti, of Bologna, a sort of universal genius after the manner of Leonardo da Vinci, and one of the Solari, the celebrated mason family of Milan.

The chief traces of direct Italian design of this period are the crenellated walls and watch towers of the Kremlin (1485), recalling the Castello Sforzesco of Milan, and the Granovitaiia Palata or Faceted Palace (Fig 3) (so called from its diamond point rustication) (1487), an imitation by Ruffo Solario in rude forms and workmanship of the Bevilacqua Palace at Bologna. It is remarkable that the acropolis which arose almost simultaneously in three great Slav capitals—the Kremlin of the Muscovites, the Wawel of the Poles at Cracow, and the Hradschin of the Czechs at Prague—was in each case the creation of Italians. With the same pliability which they displayed everywhere—in France, in Portugal, in Hungary—the Italians confined themselves in church building to giving an Italian flavour to the native and traditional forms by expressing them in Italian detail. In Fioravanti's Cathedral of the Assumption (1475), modelled on that of Vladimir, these Italianisms are reduced to a minimum; but they were gaining ground, and the Cathedral of the Annunciation, erected a few years later by builders from Pskof, has arabesqued bands and architraves, while the Cathedral of the Archangel Michael, by Alevisio Novi (1509), has a complete pilaster system and shell niches in its gables.

Russian architecture now entered upon a new era. Byzantine art, which had long been the dominant element in its development, was now cut off at its source. Germanic influence had had little force, and that confined to the Baltic basin. The Tartar era was one of destruction, not of construction. The Italians had given valuable help in the revival of the art of building, but their influence on that of architecture had been superficial. Now in the age of national expansion a more national art was to arise, shaped by the craft of timber construction indigenous in a land of forests.

Hitherto, apart from city churches, fortresses, and walled monasteries, and a handful of princely residences, virtually everything in Russia had been built of wood. The simplest rectangular structures of axe-dressed trunks laid horizontally, covered with shingled roofs, either gabled or hipped, not only served for the habitation of the peasant (*isba*) and the more well-to-do (*khorama*), but afforded types for the vast majority of churches.

The *isba* church is oblong in plan, and comprises in its most developed form a sanctuary prolonged by square or polygonal eastern apses and shut off by the iconostasis from the nave, which is approached through a western narthex or entrance hall. External galleries are sometimes added. Occasionally the church is in two storeys, with an unheated summer church below and a heated winter church above, reached by an external stair in two flights. Its plain single-span roof bears a purely decorative cupola.

The tent (or *shatiur*) church is distinguished by its generally pyramidal form. The square or octagonal nave has a hipped or conical roof, often rising in several stages and terminating in a bulb. Contributing to the pyramidal effect, the roofs of sanctuary, narthex, and chapels crowd round the central cone in tier upon tier of curiously shaped gables superimposed one upon the other and diminishing in size as they ascend (Fig. 4).

Civil architecture in wood seems to have attained considerable magnificence, but the only survival of it is the model made for Catherine II. of the Palace of Kolomenskoie, near Moscow, before it was pulled down. It had grown up bit by bit from the time of Ivan I. (1328) to that of Feodor III. (1676), and exhibited a not unpicturesque but confused jumble of spires, bulbous domes, ogee gables, Italianate windows, and rude carvings suggestive of the crude splendours of a barbaric court. The effect was doubtless greatly enhanced by the use, as on the churches, of a brilliant polychromy.

From 1530 to 1650 is regarded by Monsieur Réau as the period of a genuinely national architecture, in which the indigenous wood forms were used and developed, and their technique transferred to buildings in brick and stone and wedded to Italianesque detail.

The strange pyramidal church of Diakovo, near



FIG. 6.—MOSCOW—CHURCH OF THE BLESSED BASIL.

Moscow (1529), is one of the first to show this transference and turn its back on Byzantine precedent. Those of Kolomenskoie (1532) and Ostrovo (1550) (Fig. 5) develop the tendency. Their central pyramids tower steeplewise above the subsidiary buildings, the transition from each stage to the next being managed by means of tiers of the characteristic oggee gablets known in Russia as *bochki* (barrels). Ivan the Terrible's votive church of the Blessed Basil in the Red Square of Moscow (Fig. 6), erected by Russian architects (1560), exaggerates every native feature, and produces a striking if barbaric effect, enhanced by a brilliant decoration of glazed tiles and painted stucco.

The early seventeenth century introduced a type of church with three pyramidal steeples in a line, either over the three compartments of the church or over a single elongated compartment.

But the clergy, taking fright at so many innovations, pro-

scribed the pyramid, and made the five-cupola scheme obligatory. This decree was not, however, universally obeyed, and the architects, even if obliged to conform as regards the main building of the church, retained the *bochka* pyramid for the campanile. The enforced simplification of elevations was in any case of short duration, owing to the introduction of the florid Baroque of Poland, the first wave of that flood of occidentalism which, in spite of a revival of native architecture in the late seventeenth century in the Upper Volga cities of Jaroslav (Fig. 7) and Rostof, submerged Russian art in the eighteenth.

This development Monsieur Réau does not pursue for the present, though it is a subject which would well repay study, for the architectural activity initiated by Peter the Great, and ardently promoted by Catherine II. and Alexander I., endowed Russia, principally through the agency of French architects, with a series of great buildings worthy to compare with anything contemporary in more western lands.

It is questionable indeed whether any development or modification of the elements of the national style could have resulted in a satisfactory architecture for modern requirements. This national style was based on the two piers of a long Byzantine tradition and native timber construction. It had a thin veneer of Italianism superinduced on a bias to Oriental forms, which was due rather to age-long intercourse with Asiatic peoples than directly to the Tartar conquest. These heterogeneous elements were never thoroughly digested or welded into a consistent whole.

In the picturesque confusion of piled-up ornament and childlike love of vivid colours the crowding shrines of Moscow produce the effect of a dream architecture, palaces of Aladdin called up by glamour in a night. Behind a quiet landscape of woodland and lake, such a church, set amid the long loopholed walls and massive towers of the Kremlin of Rostof (Fig. 8) or the nunnery of Suzdal, gleams like a jewelled clasp on a sober robe. Such are the charms of Russian native architecture. A stoneless land where cities are as a drop in the ocean, and intellectual life the monopoly of an infinitesimal minority, could not be expected to give birth to a building art of more solidly architectonic quality. For this it had perforce to turn to the maturer nations of the West.

The Relation of Plan to Elevation*

By H. S. GOODHART-RENDEL

THE subject which I have chosen to talk about to-day is one of the mysteries of our craft, a subject about which the lay critic is generally ill-informed, but which to the architect is an imperative study. I think that the reason for this difference is that whereas the lay critic is concerned with what is designed, the architect is concerned not only with that, but also with how it is designed. The critic pronounces upon æsthetic effects; the architect must investigate causes, the architect must learn how to extract the proper beauties from the necessities of his programme. It is to the public advantage that Mr. Brown's house should fulfil its capacity of being beautiful; it is to Mr. Brown's advantage that his house should be convenient; it is to Mr. Brown's architect's advantage that the beauty and the convenience should be allies, rather than that they should do battle in his brain and on his drawing-board. The lay critic should look after the public interest, Mr. Brown will look after himself, and the architect must seek that manner of working in which Mr. Brown's needs will come as a help to him rather than as a hindrance.

You will observe that I do not say that the expression of plan in elevation is a virtue in architecture. I say, rather, that it is a virtue in an architect. By its practice the architect keeps himself in good condition for artistic creation. Similarly, positive irrelevance of elevation to plan is not of itself a vice in architecture, but its perpetration is likely to prove a bad vice in an architect, and one which leads to artistic sterility. All major architectural forms have a rational origin, more or less remote, and, if the art is not to die, from new needs new forms must arise. Experience shows that only thus can they come into being; little good has ever come of arbitrary invention in architecture. The architect who falsifies his plan to make it fit a preconceived elevation not only deprives his building of its rightful individuality, but also is on the road to becoming incapable of anything except of repeating himself, or perhaps of repeating other people.

This is the danger which threatens American architecture at the present time. The gay *parterre* of American architecture, which we all admire, is composed too much of cut flowers from Europe. Even the native majesty of her skyscrapers is marred, more often than not, by the misunderstood architecture with which they are trimmed. A recent writer in a popular American magazine has attempted to justify the Gothic attire in which some of these sky-scrapers masquerade by citing the coincidence of the lines of mediæval masonry design with those natural to a steel-framed structure. The

old forms serve our purpose, he says, so why not use them? Would he, I wonder, use the Portland vase as a salad bowl?

Yet these American reproductions are often beautiful: their insincerity does not spoil their appearance. The beauty of an elevation is independent of its relation to the building which it covers; the eye's proper pleasure in a façade is not that of guessing what lies behind it. Let us then be grateful for the beauty of borrowed plumes, worn for our delight; but as architects let us try to grow our own feathers. Let us not seek novelty for novelty's sake, but let us encourage it when it emerges naturally from new conditions of building. In particular, let us take our plan into our confidence and listen to what it has to say about our elevation. A good dancer whom I know divides the men with whom she dances into partners and opponents. You will be wise if you make a partner and not an opponent of your plan.

In what I have said so far I have assumed that the plan of a building is that arrangement of rooms which best satisfies the claims of usefulness and order—of usefulness, since usefulness is the motive of almost all building; of order, since without order man's work were lower than the honeycomb or the spider's web. It may be, however, that in the quest of beauty men may make strange sacrifices; they may even, for emotional reasons, require from their architect not only an unsuitable elevation, but also the unsuitable plan of which the elevation is the outcome. This need not perplex the architect. Anybody can make a fortified castle look like a fortified castle; and if a man builds it and undertakes to live in it, it is not his architect, but he himself, who will get into trouble. The architect just builds a fortified castle. No, the architect's trouble begins when the County Gaol has to be the county gaol and yet to look like a fortified castle. The best that he can do then is to design a hypothetical castle of which the plan and elevation are correctly interrelated, and to fit it by adaptation and compromise to serve as a gaol. If the result is a bad gaol, it is the fault not of the architect but of those who set him to work upon so unnatural a task.

Given, then, that the architect is wise in letting his plan have its say in the shaping of his elevations, how far is this likely to carry him in design? We are apt to speak—I myself have spoken already in this lecture—of the architectural "expression" of a plan. What do we mean by this? Do we mean merely that the building tells the spectator what rooms it contains? If that is what we mean, such "expression" is only a complicated way of doing what would be done more simply by painting up the information on an auctioneer's board. It is not of the slightest æsthetic interest to anybody that a

* A Paper read at the Liverpool School of Architecture, 12 January 1922.

house should happen to contain three reception, ten bed and dressing, two baths, h. and c., and the usual offices. There is no architectural language in which such facts can of themselves make beauty. Surely what we mean is rather the maintenance of the relative importance and dignity of these rooms, one to the other, in whatever be visible of them externally; that the drawing-room windows are taller than those of the servants' bedrooms, that the chief entrance is emphasised more than is the door of the coal-hole. Perhaps we mean, also, that the articulation of the plan is not needlessly concealed, that its elbows and knees can be detected beneath its garments. The study of the naked plan is as essential to the architect as the study of the naked figure to the painter, and a foundation of sound architectural anatomy is necessary to all expressive buildings.

This degree of "expression," however, is not always possible; in street buildings, for example, you can hardly express the anatomy of the structure in a single frontage. Sometimes, also, there may be next to nothing to "express"; the "expression" of the plan of a warehouse must be almost altogether negative. Sometimes, again, "expression" which is possible may not be desirable for reasons which are not architectural; probably the less that is made of a crematorium chimney the better. In short, a plan may be inexpressible, either because of its confined position or because it contains nothing to express, or again because it contains that which is better not expressed.

Therefore, although this expression of plan in elevation is a virtue in an architect, it cannot be a virtue necessary to salvation. Its opposite vice, however, is extremely dangerous. Truth is single, and falsehood manifold; a truthful building will enjoy in its own right that æsthetic merit of consistency which must painfully be struggled for in a building in which appearance and actuality are at variance. If I make a plan with a great room in its midst, and allow that great room's great features to dignify the middle of my elevation, if the plan is right, the elevation has a very good chance of being right too. But if, with a plan containing no such great room, I elect to adorn the middle of my façade with windows and other details of exaggerated size, the odds are thousands to one against my hitting upon pleasing proportions. I have nothing to go by. Of course, if I choose, I can plan a great room and then cut it up. But the more sensible thing for me to do is to try to express architecturally a plan which consists only of little rooms; or else, if the little rooms seem too uninteresting to be expressed, to make a decorative façade of a purely non-committal kind.

By architectural truth, however, I do not mean hair-splitting. The architect who exhibits on his elevations every small irregularity of his plan is like the man who answers the question "How are you?" by detailing

every small irregularity of his stomach. If one window in a range has a higher sill than the others, and looks ill in consequence, it is adding insult to injury to explain that this is the expression of the pantry sink. I would go further, and say that if one window in a range is filled with bricks instead of glass, it is merely irritating to be told that this is because the window spacing demanded by the plan happens not to fit at this particular point. Such an accident is extremely uninteresting; it is too trivial to make for any peculiar beauty, and good manners require that it be concealed.

Now, what is the difference between truth and hair-splitting? Why is one good and the other bad? Is it only a question of magnitude; is there a size-limit to the innocuous lie, exceeding which it becomes heinous? I cannot think that this is so. Rather do I suggest to you that truth is good in the smallest things as in the greatest, and that we all condemn hair-splitting because it is not true, because in it general truth is falsified by literal truth in some unimportant particular. Physical conditions constantly force the modern designer to suppress minor facts in order to disengage major facts and to give to these their proper expression. Either the pantry sink must remain unexpressed or else the symmetry of the façade must go. And the symmetry of the façade may be the obligatory expression of the general lay-out of the plan, a thing somewhat more important than the location of the plumbing.

Yes, the suppression of small truths is often forced by physical conditions upon the modern designer. Gothic builders knew no such compulsion, and, although Greek and Roman builders may have left much of structure unconfessed, they did this of choice, not of necessity. Why is this? What is it which has made so great a difference between ancient and modern conditions?

I do not think that it is any change in opinion about the proper relation of plan to elevation. No, I think there has been a radical change in the system of planning. Almost all modern planning makes much use of the partition-wall, a thing little used by the ancients. By partition-wall I mean a wall which divides one room from another without serving any structural purpose. It is difficult at first to suppose that such a thing is not as old as building, but a little recollection will show us that it really is not so. Let us imagine a primitive tribe of hut-dwellers of which each family man provides himself with what we to-day should call a one-roomed tenement. The chief of this tribe will feel it due to his position to inhabit twelve one-roomed tenements. These he will place close together, and he may even rig up some rude shelter over the path from one to the other. The growth of skill in building will provide the next chieftain with a conglomerate of huts in which the space between hut and hut has been annihilated. The twelve one-roomed tenements will now have become one twelve-roomed tenement. But the conglomeration

will not have been fusion. Each room will retain its hut-hood, each room will still have its own roof. Perhaps if two rooms have been placed end to end, so that their roofs are continuous, their common end-wall may have lost its structural function and become a partition-wall dividing transversely an oblong hut. This will be the first emergence of the principle of planning by division, and this is about as far as the primitive tribe will get. In the main the tribal architects will still plan by the method of congregation.

Contrast with such a hut-group the plan of a modern twelve-roomed bungalow. The modern bungalow will probably have but a single span of roof; its only structural walls will be its external walls. Architecturally it will be not twelve units juxtaposed one to the other, but one unit divided into twelve sections. Its planning will be done entirely by means of partition-walls—in other words, by the method of division.

I think that now if we return to our question, "What is it which has made so great a difference between ancient and modern conditions?" in the relation of plan to elevation, we may perhaps find an answer. The difference is, surely, that ancient plans are congregations of simple units, whereas modern plans are generally either compound—that is, subdivided—units or congregations of such units; compound units because if one roof covers several rooms of which the external walls are continuous, these rooms lose much of their individuality and become merely divisions of the larger unit defined by the roof.

Now the expression of plan in elevation can never be more detailed than the expression of the units of which the plan is composed. Yet the divisions of a unit will appear internally as separate rooms, each demanding a certain position for its window or windows, which position may not be at all that demanded by the unit as a whole. Architecture speaks in terms of structure and of ornament; partition-walls are by their nature neither structural nor ornamental, and there is no word for them in the language of architectural form. Since we cannot reveal them as causes, we must often juggle away their effects. The architectural vocabulary is limited, and capable only of the description of things of architectural interest. What are these things? What is it in a plan which we can hope to express in an elevation?

Before trying to answer this question let us clear the ground by eliminating some, at any rate, of the things which are clearly inexpressible. Most of these will have one quality in common: they will be produced by causes which are not architectural. Foremost among these nowadays will be the need for cheapness. Cheapness and dearness have nothing to do with architecture; they are facts incapable of æsthetic expression. When we say that a thing "looks cheap" we mean that it resembles things which we know to be cheap, but we do not know whether it actually was cheap or whether its manufac-

turer made four hundred per cent. profit by its sale. Most of us would say that a wall of Fletton bricks "looked cheap" even if we encountered it in the middle of China, where it probably would be extremely dear. Cheap or dear, it would still be very ugly; its money value may depend upon circumstance, but its ugliness is inherent. It is impossible that absolute values such as those of beauty in architecture should be at the mercy of the accidental values of the market. The eye knows nothing, for instance, of roof being cheaper than wall, and an over-big roof loses none of its unsightliness by providing an extra storey at the minimum of expense. Similarly, it is impossible to express architecturally the fact that, although the spacing of the façade demands that this room be thirty feet long, twenty-eight will have to do. The need for economy is a temporary thing, a need which has or has not been satisfied once and for all when a building has been paid for, and which from that moment ceases either to excuse or to accuse the design. It is a power, generally unfriendly, neutral at best, with which the designer must treat, but from which he can expect no help. Beauty is not thrift, nor thrift beauty.

Another thing architecturally inexpressible is the irregularity caused in a compound plan by the orientation of the building, the windows placed abnormally in rooms in order that they may catch the most sunlight, or perhaps that they may avoid it. South windows in corner rooms and north lights in studios often rob one elevation to over-window another, and the reason of their so doing cannot be made apparent to the eye. The demand of the Education authorities for left-handed lighting in class-rooms will play great havoc with the elevation of schools—do we not all know it?

Again, the more important rooms in a civic building, those rooms which should be immediately accessible from the front entrance, and should above all be revealed upon the façade, may be compulsorily banished to the back of the site, where only can they be out of the sound of traffic. The elevation cannot explain this.

Does it not seem then that a plan can actually be productive of beauty only when it is absolutely the best plan for its purpose, without regard to peculiarities of position or the necessity of cheapness? I think that this is so. Moreover, as I have said, architecture can only express architectural things, and the architectural things in a plan which are worth expressing are simple and few. They are, however, extremely important.

First, unless the whole plan be in itself the unit, there are the units of which the design is composed and the manner of their combination.

Next there are the relative size and importance of these units one with the other.

Then there are the distinctions in kind between these units, between rooms and communications, between places of state and those of daily use, between rooms for

men and storerooms for things. Storerooms for things may not seem very susceptible of architectural expression, but they may be so none the less. I remember being delighted once by the effect, in a noble design for a hospital, of a long frieze of small shuttered openings contrasting with the large shutterless windows of the wards. These openings lighted a mezzanine composed entirely of ladders.

Then, again, if we regard, as we should, the section of a building as the inevitable outcome of its plan, the elevation will owe indirectly to the plan its horizontal divisions, whether continuous or broken by staircases, mezzanines, or raised pavilions.

Chimneys, too, must be placed to suit party-walls, and a roof ridge will suggest the mid-line of the space which it covers.

Large and important spaces buried deep in the plan may reveal themselves externally by their dominating roofs or domes. The roof plan of a building is usually the one plan in the making of which the architect fancies himself free of all æsthetic obligations. If in the future travelling by air becomes general, a good many architectural reputations will be blasted.

I think that most of the facts of plan which are expressible and worth expressing come under one or other of the headings which I have just run through. Such facts are the matter of expression. Let me give a caution here concerning its manner. A feature may be expressible in many ways, but, having chosen one way, you must stick to it for all similar features. Otherwise your expression is false, since you imply distinctions which do not exist. To speak of an infant mammal and a baby biped would not be a good way of describing twins.

Let me, also, at this juncture insist once again upon this distinction between the appeal to the understanding and the appeal to the eye. You actually hear it said nowadays that fitness for its purpose is the highest beauty in a work of architecture. I suppose that the prophets of this doctrine consider that military march the best music which makes the most noise with the least expenditure of breath, and esteem all faces equally beautiful which have eyes, nose, and mouth in good working order. No: the truth seems to be this and no more: that architecture founded upon facts of plan and structure is not necessarily beautiful, but that the odds against it in the race for beauty are much lighter than those against architecture arbitrarily invented. Also, that since nobody could wish every building we rear, for whatever purpose, to be of one pattern, we must differentiate one from another somehow; and that it is far simpler to let each building take its natural and proper shape than to impose upon it some conventional and artificial distinction. Some people's way of expressing civic state in a block of municipal offices seems to be by hiding the plan within perfectly featureless walls and then plastering a peristyle all round it. Such folk remind me of dealers

who deodorise home-spun tweed and then sprinkle over it the scent of peat-smoke out of a bottle.

In short, although I do not say that truth is beauty, I do say that honesty is the best policy. Let us now try to see the bearing of this maxim upon everyday practice.

There is a phrase much used by theatrical critics which will, I think, suggest to us a profitable train of thought. That phrase is "the 'scène-a-faire'"; the obligatory scene, without which the author's choice of characters and story would not be justified. In a play about jealousy, for example, we expect to see the husband and the lover confront each other in the presence of the wife unless it be made plain to us that there is a strong dramatic reason why this situation must not be brought about. So in a building there is often something which must be displayed if the proper character of the design is to be developed. What this something is should be the architect's first thought in making his design.

Often the obligatory feature will be a large room appearing upon the principal elevation. This room will be given windows larger, and ornaments richer, than those given to the rest of the façade. Its limits may be defined by the projection or the recessing of its front wall. It should *not* be hidden behind the upper part of the entrance portico, nor should it form the middle storey of a frontispiece of which the equally enriched upper storey contains the caretaker's bedrooms.

If the large room appear on a flank or rear elevation, it may be possible to give it place in the front view of the building by emphasising its roof. If it be buried in the midst of the building, this can still sometimes be done. It has often, and I think justly, been said that the two houses of assembly in the Palace of Westminster ought visibly to have overtopped the buildings which surround them.

In a theatre the stage and the auditorium generally take the law into their own hands and force themselves upon the attention of the public.

In a church the obligatory feature is the place for the high altar. It is true that the mediæval cathedral quire in which the high altar stood was often overshadowed by a central tower built over what was nothing but a passage-way between screens. The mediæval cathedral, however, was two buildings—quire and nave—which might be separated by a tower; the modern cathedral or church is one. It seems certain that the best place æsthetically for the chief altar of a domical church is under the dome, whether the dome be central as at St. Peter's or placed at one end of the church as Sta. Maria dei Miracoli at Venice. A tower differs from a dome in that it calls attention to itself rather than to that which it covers. I think, therefore, that to make the place for the high altar the bottom storey of an eastern tower would be likely to result in concealing rather than revealing our obligatory feature.

It would be vain for me to attempt here to catalogue all the various other kinds of buildings which the architect may be called upon to design and to give my opinion as to what in each is the obligatory feature, and I must satisfy myself with mentioning a few. In a hospital the administrative block should, I think, be the clue to the design, in a company's offices the board-room. In any building containing an assembly hall there is unlikely to be any other feature which can compete with it for prominence. In a fire station it is not the look-out which is the most important feature in these days of telephones, but the engine-house. In a shop there should be no escaping the allurements of the entrances, broad gates tempting the doubting customer to her ruin. Places of worship other than churches should manifest by their form whether they are intended as auditories for preaching or as temples enshrining mysteries. In warehouses it seems a pity not to insist architecturally upon the manner in which goods are raised to the upper floors. In each and all of these the obligatory feature is likely under normal conditions to be expressed easily enough. Once its pre-eminence is assured, the architect must consider which of the remaining features of his design to express and which to suppress.

Now, as I see it, Architecture is wise in wearing sometimes the mask of the *bal masqué*, but never the mask of the pantomime; she may conceal her features, but she had better not put on a false nose. I have spoken already of occasions on which the architect may reject the suggestions of his plan and may make his elevation "a decorative façade of a purely non-committal kind." By this phrase I meant a façade of which all the features, whether projections or recesses, piers or openings, pilasters or entablatures, justified themselves to the eye without implying any external cause of their presence. It will generally be found that there must be stretches of such non-committal design even in those elevations upon which the more important features of the plan are strongly impressed. In these subordinate parts the pattern of the pierced wall which is the external surface of the building need not be interrupted by any extrusions from within. This pattern, however, must be chosen scrupulously that it may fit as well as possible the structure which it is to cover. There is really no excuse for such practices as that of the brothers Adam when they veneered blocks of houses with façades of which the windows played hit-and-miss with the party-walls and the floors. The most absurd example of such a proceeding which I know of is of recent date and is to be found in a hospital in London. To this hospital there has been made an addition of the same total height as, but divided into more storeys than, the old building. Without securing any symmetry thereby, the architect of the new block has adopted without modification the ordonnance of the old façade, thus causing the floors to cross the windows and the interior to be lighted in the most

extraordinary way imaginable. This example is perhaps without parallel, in that there appears no comprehensible architectural motive in the arrangement; examples are numerous, however, in which the temptation which has led to the crime can be clearly seen. All the same, a crime it is, and one which no provocation can excuse.

I do not mean by this that it is never allowable to run a floor through a window or to place a window where it is blocked by a cross-wall. The crime which I have condemned is the choice of any other architectural pattern for an elevation than that which fits the plan best. No pattern is likely to fit a complicated plan absolutely; and if people insist on taking our elevations as an oath, they are certain to detect us in some little perjuries. On the other hand, not to make a pattern at all is to refuse to reveal the order which must be the dominating quality in every good plan, and the loss of this expression is far more damaging to truth than are a few little fibs. It is only the dumb who never lie.

It seems, then, that an elevation normally will consist of what in heraldry would be called charges and field; that the charges should be the architectural expression of important features in the plan, and that the field should be a background to these; a veil hiding those features of the plan which we consider relatively unimportant. The "non-committal" type of façade to which I have referred will simply be field without charges. The field may be nothing more than plain wall, as it is at the Panthéon in Paris, but it will commonly be pierced with holes in a pattern—that is to say, with windows and doors regularly arranged. It may be as much ornamented as at our Houses of Parliament, or as little as at Chelsea Hospital. Furthermore, its pattern may suggest its structure by visible piers, arches and the like, or it may be purely unarchitectural, as in the painted houses of the German Renaissance. Supposing the field to be patterned all over, with the mimic structure of Palladianism, with rustication and pilastered orders, with pediments and window dressings, the architect must take especial care to keep in reserve sufficient relative emphasis for the charges.

When I said that the decision of what was the obligatory feature should be the architect's first thought in making a design, I assumed that an earlier and more important decision was an integral part of this one—I mean the decision as to what was to be the unit of the whole design, whether a part of a room, a single room, or, as is almost invariable nowadays, a group of rooms. The group of rooms is our old friend the compound unit, and may be regarded architecturally as a single space divided by walls in much the same way as a cloak-room or changing-room is divided by partitions—that is to say, a divided unit of which the windows are related rather to the whole than to the divisions; in short, a place in which, as one would say colloquially, the partitions had been "put in after." Such a compound unit

will also generally be divided horizontally by floors, since its height, if proportionate to its area, will be greatly in excess of the height desirable for its divisions. Therefore, if the unit be decorated by an external order, this order may reasonably embrace two or more storeys of windows, although of course the unit may with equal reason be decorated by the application of an order to each storey, in which case the upper orders become separate units in superposition.

The architect, having decided upon his unit, next must determine the obligatory feature in his elevation, must choose which subordinate features he wishes to show, and must veil the rest of his design with a background to these features. A very good way of testing the correct relation of an elevation to its plan is to set up the front wall both in plan and in section, and to produce inwards the lines of all important returns in plan and horizontal projections of cornices in elevation. If the lines thus produced from the plan coincide with those of the important cross-walls, and if the lines produced from the elevation hit off the floors, the plan and the elevation are on good terms one with the other. If, further than this, the silhouette of the roofs and the massing of the ornament reveal truthfully the relative honour and importance of the various parts of the building, we may under such conditions affirm absolutely Huyot's dogma that a good plan makes a good elevation.

It has not been my business to-day to give you my opinion of what constitutes a good plan, nor has it been my business to put forward any absolute standards of criticism by which we may judge elevations. My theme has been the relation of the one to the other, and my justification for the choice of that theme lies in the dogma of Huyot which I have just quoted. If, given certain interrelations, a good plan makes a good elevation, it is plainly to the interest of the architect to study how those interrelations may be attained. It is to that study that I have attempted to make a small contribution. It appears to me that in the common practice of my countrymen, amid much laudable and successful effort toward rational and harmonious designing, there are two little superstitions in particular which often lead to failure. These I have reserved to the last, and these I now propose to put before you.

The first is a belief in the magical properties of symmetry. If an emphasised feature occurs at one end only of a building, it must be counterfeited at the other. Why? Symmetry is a good thing if a plan falls symmetrically, otherwise it is vanity. The flank of a building is often naturally unsymmetrical; the human head in profile has not got a nose on both sides. The front and back of a building will normally be symmetrical if the plan is well

studied, but two symmetrical elevations are enough for any building of ordinary constitution. In a street building it may be the flank which shows. Study the practice of the French in this matter, particularly in the façades of their blocks of flats. If two flats appear on the frontage, the street front will be symmetrical; if only one appear, it will seldom be so. Consequently the rooms of the French flats will generally be symmetrical internally, whereas with us the cross-walls will come anyhow in relation to the windows.

The second superstition, and the last thing with which I shall trespass upon your patience, is a dread lest the ends of our street façades should look weak. If a plan be divided evenly into bays, there will be between the end window and the limit of the façade only half the breadth of a pier plus half the breadth of a party-wall. This will be sufficient, in plenty, for the profiling of any reasonable window dressings and the accommodation of a down-pipe. In a street building, where our front wall is flush with those of our neighbours, what more can we want? Apparently, to judge from their practice, many architects want a great deal more; they want room for coupled pilasters or for rusticated piers or for some other feature of the kind. In order to secure these massive corners, the spacing of the remainder of the façade is crowded together and dislocated, the windows are placed eccentrically in the rooms, and often enough the end rooms are insufficiently lighted. This illogical practice is a typical product of paper architecture. A street façade is in effect merely a certain length of frontage; on paper it appears as an isolated design. Where a building stands free the corner rooms gain light from two directions; it is therefore logical that, since they are doubly windowed, their windows themselves should be smaller and more widely spaced than those elsewhere in the elevations. In a building joined on either side to other buildings the end rooms have no advantage in lighting over the middle ones, and it seems to me illogical in the extreme to sacrifice their fenestration to any convention in the design of the façades.

With this note I must end my lecture, not because I have come to the end of what I would like to say upon the subject, but because I have got as far as I can go without embarking upon the endless study of things of detail. I believe most firmly myself in the importance of a close relation between plan and elevation in architecture, and I have tried to put my reasons for this belief before you. I have further tried to show how this close relation may be attained. If I have succeeded in any small degree in clearing the way for your deliberations on this subject, I shall have done all that I have hoped to do, and all that a lecturer has any right to attempt.

The Class-room in School Planning

By ELWIN H. T. NASH, D.P.H.,

*Vice-President Medical Officers' School Association,
Member of Joint Committee on School Lighting, etc.*

As a School Medical Officer, particularly interested in school planning, and a member of the Joint Committee on School Lighting to which Mr. Widdows referred, I wish to pay my tribute to the immense value of Mr. Widdows' work in forwarding the progress of school planning. Those of us who look at the school from the point of view of a School Medical Officer have been in recent years somewhat critical of many designs, in that they have not started from the point which Mr. Widdows emphasises—namely, the class-room.

In spite of what Mr. Widdows says, it appears to be important to evolve the ideal class-room now as a basis for design. If we have an ideal, we can always improve it in the light of future work. There appear to be several matters of importance which are overlooked by architects in designing the class-room. It must be borne in mind that the class-room is the place in which the child spends the greater part of its school life, and although the design of a school as a whole may be left to a large extent as a matter for individual research, it should start from a more or less agreed design of class-room. It must not be forgotten that, whereas Mr. Widdows in his paper and all his writings postulates a single-storeyed building, in large towns and congested areas it will not be possible to carry out that ideal, particularly at the present time, owing to expense of sites, and we shall be faced for some time to come with the two- and three-storeyed building, which will have to be modified in the light of Mr. Widdows' suggestions.

With regard to ventilation, one is struck by the fact that the epoch-making researches of Professor Hill are not common knowledge amongst some of the leading lights in the architectural world, as their influence on the design from the point of view of ventilation must be very large. This brings us up against the difficulty of securing through ventilation on what one may call the corridor wall of the class-room. Windows on this wall, if under the verandah, which is the usual method of dealing with these single-storeyed schools (and will have to be much the same in two- or three-storeyed schools), are useless from the point of view of lighting, because the amount of light which is admitted beneath the verandah is actually less on the desk adjacent to the wall than it would be from a reflecting wall, and would, I presume, also be less than from a light-coloured wall with impervious hoppers painted a similar colour to the

wall. The value of the reflection from this corridor wall has never been sufficiently realised, nor had its figures been measured, as far as I can ascertain, until I published my report on school lighting, in which I showed that in a series of class-rooms identically the same size, half of which opened on to a hall with windows for the purpose of borrowing light, the other half having merely a solid wall, and all the rooms being Duresscoed pale stone colour, the proportion of light in the class-rooms without windows, on the desks against the "corridor" wall, was as 5·5 foot-candles, compared with 4 foot-candles in the class-rooms with the windows adjoining the hall of a Ben Jonson type school.

The importance of the properly designed hopper makes an immense difference to the question of complaints of draughts from the children, and so leads to less likelihood of the closure of this important means of ventilation.

It would have been interesting to have heard if Mr. Widdows has made any smoke experiments with the Chaddock window, and, if so, what opinion he has arrived at with regard to it.

With regard to lighting, it seems important that we should establish whether or not the principle of bilateral lighting, which has been regarded as unsatisfactory for so long, should be accepted, or whether the design should concentrate on left lateral lighting. In view of the smaller classes and improved design, it should be possible adequately to light any class-room from the left; and there is no doubt that, from the point of view of writing and drawing, the absence of conflicting shadows is an immense comfort. If this can be obtained, and at the same time through ventilation, it is a question whether this should not be the ideal to strive for.

One is particularly glad to see Mr. Widdows accentuating the point which one has been hammering at for years—namely, the abolition of the glazed partition. There is not one good point to be made for glazed partitions; so much so that one will be inclined to regard it as a sign of incompetence to find glazed partitions in any future design. The drawbacks of the glazed partition are (1) noise; (2) absence of privacy; (3) the particular drawback which Mr. Widdows has emphasised—viz., that the light comes at an acute angle in the eyes of the pupils of a large portion of the class-room; (4) in the majority of cases after a short time they become ill-fitting and cause a draughty room; (5) that it is impossible to fix a blackboard to them. If it is thought necessary, and this should be on the rarest possible occasions, that it should be possible to throw two class-rooms into one, any partition should be of wood and should be coloured in the same manner as the walls of the room, and, further, the surface should be flat on either side if possible. It might almost be laid down as an axiom that no school

with a hall should have a movable partition separating two class-rooms.

With regard to glazing, it should be an absolute *sine qua non* that no class-room should be spoilt by the attempt to borrow lights for or from a hall, particularly of the Ben Jonson type, as windows effect no useful purpose either in the class-room or in the hall, and spoil both by tending to make the class-room less soundproof and spoiling the general effect of privacy. With respect to glazing, I have still to understand why it is necessary to glaze the doors to a class-room as is so frequently done. As Mr. Widdows points out, we have long passed the day when it is necessary for the head teacher to be peering into every class-room in order to maintain discipline. Whilst on the question of doors, one may call attention to a little matter of oversight one has seen on more than one occasion, in that highly artistic doors have been put in infant departments where the handles have been put at such a height that few of the children were able to reach them.

I notice Mr. Widdows in his diagram places the movable blackboard practically in the centre of the room. It may be the custom in Derbyshire, but it is certainly not the custom in most schools where movable blackboards are in use; the usual place being considerably nearer the door, the board generally being put there with the idea that at that angle more light is thrown upon it. They are also generally found much nearer the front desk, and on many occasions I have found that the children in the two front desks have been unable to see owing to the board appearing shiny, due to reflected light. It should be, in my opinion, a standard thing in all class-rooms that the blackboard should be fixed on the facing wall. Unless there is a special window, as in Christ's Hospital, Horsham, it is as well not to take it to within two or three feet of the window wall. What is found so often in class-rooms in elementary schools is that the room is dominated by that abomination the store cupboard. This is found either between the teacher's desk and the door or between the teacher's desk and the window, the best lit part of the facing wall. Surely the difficulty can be got over by the incorporation in the original plans of a 3 ft. 6 in. cupboard with sliding doors, running from the window wall the whole length of the facing wall with the exception of four or five feet near the door; the blackboard can be then placed over this and will be quite accessible and well lit. This would give sufficient storage room for all the books and apparatus required, and would not in any way spoil the class-room, as there is, as a rule, sufficient room between the teacher's desk and the wall. There is no comparison between the room with such a form of cupboard and one in which those store cupboards supplied by the educational firms are in existence. Further, there should be no necessity for buttresses of any kind in a facing wall; it

should be an axiom in class-room designing that the facing wall should be absolutely flat. Movable blackboards have been rendered necessary in many cases owing to the class-rooms having irregular facing walls or glazed partitions.

There is another important point in class-room designing—"banking," which was introduced with the idea that it facilitates the teacher seeing every child's face. In the old class-rooms of 60 or more there was something to be said for it, but even then the whole difficulty might be got over by raising the teacher on a small platform. Banking is now unnecessary, and it is not conducive to cleanliness of the rooms owing to the difficulty in moving the desks.

With regard to artificial lighting, I see Mr. Widdows fixes the height of his lights at 8 feet 3 inches, and also advises prismatic globes. This violates the recommendation of the Joint Committee "that no lamps should come within a solid angle subtended at the eye by the blackboard and a space 2 feet above it, unless they are completely screened from the eye by a shade impervious to light. In general it is desirable that no incandescent surface should be visible to the eyes of students or teachers while carrying on their ordinary work."

In practically every instance with a fixed blackboard on the facing wall, the front row of lights at a distance of 8 feet 3 inches from the floor will come within this solid angle. There is another point which has been brought about by the introduction of the gas-filled lamp, even when the source of lighting is actually screened by an impervious shade, which is that, owing to the high illuminating power of the source of light, there is a difficulty in seeing when this comes within the solid angle referred to. The same applies to the present high-power gas units. A very good instance of this came under my notice comparatively recently, where I was asked to report on the relighting by gas of a large school. It was practically impossible to see anything on the upper part of the blackboard owing to this glare produced by the high-power units within this solid angle, although the incandescent surface was shaded. There is likely to be considerable difficulty with glare in the installation of this new high-power gas unit as well as gas-filled lamps, and particularly at the present time owing to the strenuous demand for economy, where comfort of the pupil is likely to be sacrificed to the fact that the light varies inversely as the square of the distance. If it is either necessary or the most comfortable to have left lateral lighting, I cannot see why, if this is desirable in daylight, it is not also desirable as far as it can be obtained with artificial light. In the experimental lighting of some schools which I carried out in 1912, I placed the new lights to get this result as far as possible. The lights were placed in the following manner: the first row was placed 1 foot from the window

wall, thus making the greatest use of the value of the reflected light from the wall, the next row was placed 7 feet 8 inches from the first, and the next row 9 feet 2 inches from this one, leaving in the particular classrooms the space of 5 feet 9 inches between the last row and the corridor wall. This practically abolished right-hand shadows.

With regard to heating, one is waiting to see some further development of the steam-heating system of Mr. Widdows, or possibly the duct-heating system as mentioned by Mr. Gilbert Scott. One thing which we, as School Medical Officers, have to face in poor districts is the pride of the poor parents who insist on their children coming to school in boots. These boots often have the uppers just holding together and the soles full of holes, the children in wet weather arriving at school with not only their boots but their stockings sopping wet. With our ordinary methods of heating and ventilation, it is a long time before these children get their feet warm; in fact, often they do not get warm throughout the session. This is a fertile source of illness. Where the children come to school with bare feet, within a few minutes their feet are dry and they are fairly comfortable; but unfortunately the parental pride insists on boots being worn which are really a constant menace to their children's health. With this type of child one can conceive that their prospects of warmth would be infinitely greater under the heating systems advocated by Mr. Widdows and Mr. Scott.

There is one point with regard to designing single-storeyed buildings that seems to be mainly used on account of its architectural amenities, which is the use of a central dormer in the case of three-window and a single one in the case of two-window class-rooms. In these cases the other window or windows are not carried up to within 18 inches or 2 feet of the ceiling, which makes for poor lighting in the farther part of the room which that particular window supplies. This particular architectural device starves the lighting of the row of desks along the corridor wall.

I differ from the speaker who stated that "he did not see a school that might not have been the result of an extremely successfully conducted competition." Mr. Widdows' work has been so far in advance of current thought and design that I am sure few of his designs would have been placed in the winning position if judged by committees or assessors anxious to do the safe thing.

So important do we School Medical Officers consider this evolution of the ideal class-room that we are asking Mr. Widdows to open a discussion with the idea of inviting criticism, so that we may get as near as possible to what is considered from architectural, hygienic and scholastic point of view the ideal class-room.

Personally I wait with great interest the design of a three-storeyed school by Mr. Widdows for a site in some congested area.

Reviews

LA SCULPTURE À L'ÉGLISE DE BROU. By Victor de Mestral Combrement. [Paris, C. Massin.]

The church of Brou is the last splendid effort of Gothic architecture in France, the result of a single impulse, begun in 1505 and entirely finished in twenty-seven years under the guidance of a most cultivated woman, Marguerite d'Autriche, widow of Philibert le Beau, Duc de Savoie.

One of the "Petites monographies des grands édifices de la France" is devoted to its general description, and the present finely illustrated work treats of the sculpture which adorns it, and in particular of the superb "Retable des Sept-Joies" of the tombs of Philibert and Marguerite and of his mother, Marguerite de Bourbon. It is a conventual church, not very large—the nave is just under 33 feet wide—and its chief peculiarity is the almost entire absence of Renaissance influence in the ornament, except in the woodwork; indeed, it is difficult to realise that Germain Pilon and Jean Goujon were working in Paris while it was building.

Marguerite d'Autriche, who was brought up at Brussels, confided the work to Van Boghem, master-mason of that place, who brought his assistants with him, so that the design is rather Flemish than French.

The architecture seems to show a revulsion from the flamboyant extravagance of the fifteenth century; the interior in particular is sober and almost austere in effect, and this is heightened by the hard white stone employed, which time has scarcely coloured.

An examination of the jointing seems to show that the working of the stone was done on the banker, and not after fixing, as usual in France.

This must have necessitated elaborate drawings, and we are told that Van Room, of Brussels, who designed the tomb of Philibert, supplied full-size drawings for it.

The carving is very naturalistic in character, and extraordinarily dexterous in execution, the deep undercutting recalling often the woodcarving of Grinling Gibbons.

All the effigies, and probably also the charming little angels, were the work of Conrad Meyt, a Swiss sculptor, and compare not unfavourably with the best work of the Italian Cinquecento artists.

CHARLES E. SAYER [A.].

PLOUGHSHARE AND PRUNING HOOK. By Laurence Housman. Lond. 6s. [The Swarthmore Press, Ltd.]

Laurence Housman's *Ploughshare and Pruning Hook* consists of ten lectures on a variety of subjects, and contains much which, as the author suggests in his

preface, will be unwelcome to some of his readers. Its claim to the attention of architects, as architects, is the inclusion of the two essays, "Use and Ornament (or the Art of Living)" and "Art and Citizenship."

In the latter Mr. Housman pleads, among other things, for the well-designed article made to last, as opposed to the ill-designed article apparently deliberately made to break down at some crucial point before the rest is worn out. He even states that "in the majority of houses whose cold water systems I have inspected the pipes are nearly always run at the most exposed angle of the containing walls, so that if there is a frost, the frost may have a chance of getting at the pipes and bursting them, and so give the trade a fresh job." Of course, if Mr. Housman writes like this, he cannot well expect *everyone* to welcome his efforts!

Mr. Housman sees hope for better things in the fact that some of the new poor "have come back to manual labour in various forms, in farming, in horticulture and in craftsmanship, and are bringing, presumably, their standard of honour to bear on those trades on which they no longer foolishly look down." It is not, however, suggested that any of these worthy people have had the good fortune to become plumbers.

In "Use and Ornament (or the Art of Living)" an attempt is made to demonstrate the utility of beauty. It is not a new theme, but it is well tackled, and the tackling of it is opportune.

"To that end—man's enjoyment of life—all art is profoundly useful, . . . but it is usefulness extended in a new direction; leaving the material uses, by which ordinary values are measured, it shifts to the spiritual; and by the spiritual I mean that which animates, vitalises, socialises.

"To that end it may often be . . . that, in the material sense, art is a useless addition or refinement upon that which was first planned merely for the service of a man's bodily needs. Yet where the need is of a worthy and genuine kind, art never ceases to rejoice at the use that is underlying it. This can be clearly seen in architecture, where the beauty of the design, the proportion, the capacity of the edifice—though far transcending the physical need which called it into being—remain nevertheless in subtle relation thereto, and give to it a new expression—useless indeed to the body—but of this use to the mind, that it awakens, kindles, enlivens, sensitises—making it to be in some sort creative, by perception of and response to the creative purpose which evoked that form. You cannot enter a cathedral without becoming aware that its embracing proportions mean something far more than the mere capacity to hold a crowd; its end and aim are to inspire in that crowd a certain mental attitude, a spiritual apprehension—to draw many minds into harmony, and so to make them one—a really tremendous fact when successfully achieved."

As architects we may well thank Mr. Housman for his attitude towards our much misunderstood art. If we do not like some of the views expressed in his other essays, we shall at least agree that they are sincere and stimulating. The little bit about the water pipes does not really trouble us at all, for we have the consolation of knowing that had the author inspected the houses which *we* have designed, he would have come to quite a different conclusion.

W. S. PURCHON [A.].

The Library

NOTES BY MEMBERS OF THE LITERATURE COMMITTEE ON RECENT ACQUISITIONS.

[These Notes are published without prejudice to a further and more detailed criticism.]

ACADEMY ARCHITECTURE AND ARCHITECTURAL REVIEW. By A. E. Martin-Kaye. Vols. 52 and 53. Sm. 40, Lond. 1921. 10s. each. [B. T. Batsford, Ltd., 94 High Holborn, W.C.]

A useful publication for those who wish to know what is being done in the way of building and decoration, especially if they are interested in the name of the firm who "supplied the chintzes."

C. E. S.

GREEK ART. By H. B. Walters. 5th ed. 80, Lond. [1914] [Methuen & Co., Ltd., 36 Essex Street, W.C.]

A little book which will be useful to students in the study of Greek architecture. It deals briefly with architecture, painting, vases, bronze work, terra-cottas, gems and coins and contains a useful chronological scheme of Greek art.

H. C. B.

OPERA MATHEMATICA OU ŒUVRES MATHÉMATIQUES, ETC.—Par Samuel Marolois: ob. fo, Amsterdam. 1625-27.

This is a very curious work by a little known Flemish or Dutch author treating of geometry, perspective, fortification and architecture. It incorporates a treatise on the Orders by Henry Hondius of The Hague (1573-1610), published in 1620, and is profusely illustrated with fine engravings by Vredeman de Vries.

W. H. W.

LOCKWOOD'S BUILDER'S, ARCHITECT'S, CONTRACTOR'S AND ENGINEER'S PRICE BOOK FOR 1922. Edited by J. P. Allen. With a supplement containing the London Building Acts 1894-1909 and other enactments relating to buildings in the Metropolis, with the by-laws and other regulations now in force. Notes on all important decisions in the Superior Courts and Index to the Acts and Regulations. 80, Lond. 1922. 7s. 6d. [Crosby Lockwood and Son.]

ILLUMINATED MANUSCRIPTS. By John W. Bradley. 2nd edition. 16mo, 1921. 3s. [London: Methuen and Co., Ltd.]

ENAMELS. By Mrs. Nelson Dawson. 2nd edition. 16mo, 1921. 5s. net. [London: Methuen and Co., Ltd.]

DALMATIENS ARCHITEKTUR UND PLASTIK. By Cirillo M. Iveković. 5 vols. in 4 portfolios. Vienna. [n. d.] [Wien: Verlag von Anton Schroll and Co.]

Correspondence

ARCHITECTURAL EDUCATION.

11 Suffolk Street, Pall Mall, S.W.

24 February 1922.

To the Editor, JOURNAL R.I.B.A.,—

SIR,—It is to be hoped that Mr. Colcutt's recent address to the R.I.B.A. upon education, and the opinions it evoked, may rouse the latent forces of the Royal Institute in regard to the future outlook.

Ever since I was a student at the A.A. under the voluntary system, and a member of the A.A. Council for some years about the time the Day School was established, I have advocated, although not in the limelight, that the recognition by the Institute of scientific attainment and its practice in combination with art should be welcomed and not regarded as superfluous, which I venture to think it has too largely been for at least the last half-century. It has not been so regarded in America during that period, and hence I think architecture has benefited in that country.

It is, therefore, hopeful to find such a great authority as Sir Aston Webb expressing a favourable opinion upon this combination in the following words, which I trust may bear early fruit :—

"You say we must not worship Wren too much ; no doubt we ought not to, but anybody who studies St. Paul's must worship him. He was a President of the Royal Society—I think he was its first President ; he was a highly scientific man and a great astronomer, and certainly he was the greatest architect that England has ever turned out. So it does not show at all, I think, that because a man is instructed in mechanics, in engineering and such-like, that he need not also be the very finest and most artistic architect."

Scientific knowledge, combined with art, was surely on a high pinnacle when all the great historical buildings were erected such as St. Paul's, Notre Dame, St. Peter's, the Pantheon, Santa Sophia, the Parthenon, the Temple at Karnak, etc.

I again suggest, therefore, that recognition of this principle by the Institute, and its general adoption by the Board of Architectural Education and all students, would confer great and lasting good upon architecture, architects, the Institute and the public. I agree that outstanding creative artists probably possess natal endowment, and that they are rare ; so I would suggest a modification of the well-supported theory, "artists are born not made."

As the range of artistic and scientific attainment is so wide, I think it would be more accurate to say :—

True artists are born, not made.

True scientists are born, not made.

True architects are born artists and scientists.

I, however, yield to none a greater appreciation of the fact that the finest art is the acme of architectural design

as produced by the five essentials—sound construction, scale, proportion, fitness and beauty. I submit that architecture thus conceived should attain the highest merit.

I constantly observe in modern architectural practice the necessity for a wider scope of knowledge and equipment than the fashionable narrow one which is limited to superficial aesthetics, and some of it might be innate, but much could be acquired. It is, moreover, in the future of this democratic world that our students will have to serve the public, and not alone in the easier paths of past ages. For instance, it can hardly be denied that a knowledge of geology is advantageous for the design and the life of modern buildings, the benefits of which I have myself experienced. Probably, however, nothing human can be quite perfect ; and I think if Sir Christopher Wren had been as well versed in geology as he was in astronomy, much of the present trouble in regard to St. Paul's Cathedral would not exist.

It appears to me that the "gloomy" outlook for architects in this country is now clearing, and a dawn is at last breaking ; but the field will not be limitless, and I think the fully equipped will prove the most successful, provided always that their knowledge be dominated by true art. May I suggest, therefore, that if the standard and scope of architectural education and the qualifications for architects were increased rather than diminished, the art of architecture would probably benefit in a like degree.—I am, sir, your obedient servant,

JOHN MURRAY [F.].

ARCHITECTS' LANDSCAPES AND TREES.

To the Editor, JOURNAL R.I.B.A.,—

SIR,—I listened very attentively to Professor Rothenstein when he recently delivered his address on Architectural Draughtsmanship. Of course I enjoyed his remarks very much, though the examples which were displayed on the screen of modern drawings seemed to me, as Mr. Chalton Bradshaw remarked (in seconding the vote of thanks), pretty "much like back numbers which very few of those present could admire." The slide shown of Norman Shaw's draughtsmanship was badly yellow-stained and most unfortunate. I am familiar with the original. The lecturer told us that Shaw would have been better advised had he employed someone else "to put in his trees and bits of landscape" because as it was "they scarcely appear to a student of art to be drawn by a contemporary of Watts, Burne-Jones or William Morris." The Professor prefaced his lecture by a foreword to the effect that possibly we might not as architects comprehend what he was driving at. Certainly I must admit that I fail to see the drift of this allusion to "Watts, Burne-Jones or William Morris" in connection with architectural perspectives

by Norman Shaw. It all depends, I suppose, upon how one judges the pictorial rendering of architecture and drawings of buildings. May I, however, add that Norman Shaw did precisely what Professor Rothenstein blames him for not doing, inasmuch as Shaw often did employ someone else to "put in his trees and bits of landscape" to his perspectives.

MAURICE B. ADAMS [F.].

PROPAGANDA AND PUBLICITY.

34 George Street, Hull,
18 February 1922.

To the Editor, JOURNAL R.I.B.A.,—

SIR,—Permit me to make three suggestions:—

1. That an announcement be made by the Council, from time to time, in the Press, to the effect that members of the R.I.B.A. do not advertise.

2. That the principal Free Libraries be supplied with a copy of the JOURNAL and the Kalendar.

3. That the significance of our initials be indicated to the editors of the more important works of reference.

Extraordinary as it may appear, I have seen the announcement of the birth of a child to a member of the Institute classified under the distinctive surname Ariba.—Yours faithfully,

DUDLEY HARBRON [F.].

PUGIN STUDENTSHIP.

40 Gunterstone Road, W.14.
6 February 1922.

To the Editor, JOURNAL R.I.B.A.,—

SIR,—The JOURNAL of 28 January contains the announcement that no drawings have been submitted for the Pugin Studentship this year.

The writer would submit that this fact constitutes a reflection on Architectural Education, and should be taken to heart by those concerned therein. The inference seems to be that present-day students are apathetic towards the mediæval architecture of our own country—the beautiful traditional style of England which, if it may not rival contemporary work on the Continent for size and grandeur in its larger buildings, is yet unrivalled throughout the world for sheer grace and loveliness.

Surely those responsible for the curriculum of British Architectural Schools cannot believe that in the study of architectural history the Classic Orders and the Renaissance are all that are really worthy of serious consideration; and if so, surely the students themselves—Englishmen for the most part, and brought up in the knowledge and love of their country—cannot assent to such a belief without protest.

But if this is indeed the case, may not the writer hope that many will concur with him in hoping that this state of affairs may prove to be a very transitory phase? The

youthful enthusiasts who are so fond, nowadays, of making the Victorian Gothic Revival a butt for their humour would do well to study, in a more tolerant spirit, the grand enthusiasm that inspired it, and give up a little more of their time to the study of English mediæval work. Let them be warned, however, that such study may make of them enthusiasts too, and that their names, at some future time, may be treated with the same scant respect, and their works with the same blind prejudice, as now are those of such men as Pugin, Street and Pearson.—Yours faithfully,

SHERARD J. H. PRYNNE [A.].

William Butterfield

By MAURICE B. ADAMS [F.]

It was a happy idea and a generous thought which induced my friend Mr. Lindsay Butterfield to present the Institute Library with the apprenticeship agreement between his revered uncle's father and Thomas Arber the builder, of Horseferry Road, in 1831. Mr. John E. Newberry, on page 211 in the current issue of the JOURNAL, quotes another incident from my paper, "Architects from George IV to George V" (read before the Glasgow Institute of Architects in 1912*), as to this pioneer and great Victorian architect having been registered in 1831 as a student of the "Architects' Society," which association became defunct prior to the founding of the Institute in 1834. At first sight these two statements appear contradictory, but actually are not so. I quite agree that Mr. Newberry is right about William Butterfield senior's probable intention as to making his eminent son a builder, thinking a good honest trade likely to be more lucrative than a doubtful profession. The boy was evidently actuated by different aims, and so associated himself with the study of architecture, as above stated. To understand correctly what happened, I suggest it is well to remember how the enterprise of a builder and the function of an architect were comprehended during the earlier half of the nineteenth century. The business of building is inherent in both occupations, and for a considerable time both callings were in practice united in individual cases or they were regarded as interchangeable. For example, in 1794 Sir John Soane gave up a place of £300 a year in the Board of Works and was the means of obtaining the post for Mr. Groves, a builder.† Sir William Chambers and the Brothers Adam personally undertook building contracts for producing finished structures complete, and Robert Adam, of course, also designed and supplied the furniture for some of his mansions so built. Henry Holland, the architect, as a case in point, bargained to erect a house for Lord Thurlow for £6,000, but it ran up to £18,000, and an arbitration ensued, when G. Dance and J. Wyatt, R.A., acted as assessors, deciding that Holland should refund part of the cost to his Lordship.‡ This doing of builders' work by architects naturally induced a very uncertain view as to the relation-

* JOURNAL R.I.B.A., 20 June and 27 July 1912. (Full report and list of architects attached made up to that date in the order of their birth.)

† Farrington Diary, 1794.

ships of professional architects, while even to this day ordinary people regard the practitioner in architecture as an expensive luxury and reckon a "Surveyor" of any sort as good, if not better.

The first architectural journal published in England was issued in 1786, and George Cook, who practised in the dual capacity of architect and builder, acted as editor and the well-known John Carter did his illustrations. *London's Encyclopædia of Cottages, Houses and Farms*, produced in 1830, the year of William Butterfield's start in the profession, shows how little architecture was popularly appreciated when the chemist of Norfolk Street, Strand, took his son William to the Pimlico builder's yard of T. Arber. Anyhow, it was thought a practical step to make William a craftsman and constructor. James Brooks, also one of the most accomplished church architects of the past century, commenced his career in a similar fashion. My father, too, shared the elder Butterfield's notions, and so before I was articled I worked with three good building firms and helped Thomas Cain to make a large oak rood screen from the designs of Sir Gilbert Scott. Simultaneously I was attending a Science and Art school, and became subsequently an assistant master under the Kensington Department. My excuse for this personal reference is that I am enabled the better to realise the state of affairs alluded to and make my point clear.

After Butterfield had commenced to practise he worked in a smithy to personally execute some of his wrought-iron designs. Whether such unconventional methods as these would be advantageous nowadays or compatible with present conditions is another matter. J. M. Brydon and his contemporaries, such as J. D. Sedding, tried to associate architectural practice with craftsmanship, and there can be no doubt that any architect is all the better for a practical experience as to the economic use of materials and the way of handling them from a builder's standpoint. After all that architects have suffered during and since the war (Sir Charles Ruthen's recent charge as to their being profiteers notwithstanding), I question whether it may not become necessary in the near future for ordinary working architects to revert to the eighteenth-century methods by combining building work with architectural design—that is to say, if they are to obtain a reasonable livelihood and pay the taxation imposed by a Government subsisting on subsidies and pledged to bonus increments to opulent officials, often out for power rather than the cause; while "the brutal and extortionate upthrust from below" prevents an economic output in building. The outlook is not inspiring, and "unification" is difficult to realise in the face of contemporary conditions.

Messrs. Colcutt and Hamp were the designers of the First Saloon of the P. & O.S.N. *Narkunda*, an illustration of which was given in Mr. Arthur J. Davis's Paper on the Decoration of Ocean Liners, which appeared in the last issue of the JOURNAL. No architect's name was attached to the illustration, as it could not be ascertained at the time of going to press, and the design may have been wrongly attributed to Messrs. Mewes and Davis, whose names appear on an illustration placed beneath.

* Walther Rathenau, 1921, great German Socialist?

The Royal Academy and Mural Decorative Art

The President and Council of the Royal Academy, with a view to promoting the Arts of Design connected with the decoration of buildings, propose to hold an Exhibition of Decorative Painting and Sculpture at Burlington House in January and February 1923. The Exhibition will have a twofold object: in the first place, to direct the attention of the public, and especially of those who are concerned with the erection and adornment of public buildings, to the important part which the arts of painting and sculpture should take in architectural schemes, by showing what British artists can contribute to this end when suitable opportunities are offered to them; and, secondly, to suggest to younger artists and students the great possibilities of these Decorative Arts for the expression of the thoughts and feelings of the community at each turning-point in its history.

The Royal Academy Schools have recently started the study of Decorative Painting on a large scale, and other Schools of Art are working in the same direction. The President and Council think that the time has now arrived for a public review of our resources and openings in this field of art, and they therefore hope that civic authorities throughout the country will take a prompt and practical interest in the scheme of the Exhibition, which will include works in painting, mosaic, tapestry or sculpture for the permanent decoration of buildings, and designs or cartoons in drawing or painting, models in plaster, etc., for such decorations. They are confident that with suitable encouragement many of our younger artists will be found capable of carrying on and developing the great traditions of these once honoured, but now neglected arts.

Decorations designed as suggestions for imaginary buildings or spaces would be acceptable for the Exhibition. At the same time, with a view to the practical encouragement of artists in this direction, the President and Council would be glad to know of any schemes of decoration which municipal or other authorities either intend or might find it possible to put in hand, and would hope to receive information, with details of the measurements, lighting, etc., of any definite spaces in buildings which would be available for decoration with subjects of local or national interest by an artist or artists selected by open competition; it being understood that such authorities would not be bound in any way to accept any of the competing designs.

The London County Council has agreed to place certain wall spaces in its new County Hall at the disposal of four of the principal Art Schools of London, for decoration by the students under the supervision of the masters of these schools. The Committee of the British Empire Exhibition, 1924, will also, it is understood, provide a large extent of space for mural decoration in the new Exhibition Buildings at Wembley Park. It is hoped that other municipal authorities will follow these examples.

The modern understanding of the high position and value of mural decoration—of its part in the rhythm and harmony of an architectural design, and its power of commemorating the spirit of a race—is immediately due to the

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work of Puvis de Chavannes in France. But it should be remembered that he was only reviving, though with the peculiar force and freshness of his genius, the spirit of Decoration as it was known to the mosaic artists of the Byzantine period, to the mediæval artists who adorned our cathedrals with painted and sculptured scenes from sacred and national legends on roof and wall and window, and to the great Italians of the Renaissance whose frescoes and reliefs play so splendid and yet so integral a part in the effect of the churches and palaces of Florence, Venice, Rome and other famous cities. By means of these decorations the Arts were made a source of inspiration to everyone. Their influence was blended with the daily purpose and use of each building, and made itself felt by a quiet and habitual impression; they were thus accepted as an essential part of an æsthetic and social education which continued, as a matter of course, throughout the life of the ordinary person.

It is something of this spirit that the President and Council of the Royal Academy desire to see revived, and they hope that suitable opportunities may be found for its realisation in our public buildings.

CONFERENCE ON LABORATORY FITTINGS.

The Council of the Chemical Society arranged a Conference in July 1920 to consider whether, in view of the high prices of materials, economies could be effected in the equipment of chemical laboratories. Mr. Paul Waterhouse, Mr. Alan Munby, Mr. Stanley Peach, and Mr. George Hubbard represented the Institute at the Conference. The result of the meetings of the Conference, and of a small committee of the Chemical Society appointed to investigate present practice, has now been published under the title of "Notes on the Furnishing and Equipment of Chemical Laboratories." The report contains an epitome of the methods in use for forming and treating bench-tops, reagent shelves, fume cupboards, sinks, and waste channels, while notes on ventilation, supply services, and floor and wall surfaces are added. A short bibliography is given on the subject of laboratories, upon which, however, there is very little literature. *Nature*, in reviewing the report, says: "Laboratory fittings are always costly, and at the present time, when so much educational work is held up owing to lack of funds for its material development, any information which will enable those responsible for designing laboratory fittings to cheapen and simplify requirements is bound to be of service. As regards the use of wood particularly, it seems much to be desired that experiments be undertaken in order to ascertain whether many of the cheaper soft woods cannot, by impregnation or other suitable treatment, be made to serve in place of imported hard woods."

The report may be consulted in the Institute Library.

THE ROYAL WEDDING.

By command of His Majesty, the President of the Royal Institute of British Architects and Mrs. Waterhouse were invited to be present at the wedding of H.R.H. Princess Mary.

HIGHER BUILDINGS FOR LONDON.

At a General Meeting of the Institute on 6 March the question of permitting higher buildings in London was discussed by a large audience. The meeting, after an exhaustive discussion, decided by a majority of 79 votes to 8 to support the Council's action and to condemn the movement in favour of higher buildings. A full report of the proceedings will be given in the next issue of the JOURNAL.

R.I.B.A. ANNUAL DINNER.

The annual dinners of the Institute, which have been suspended since 1914, will this year be resumed. The dinner will be held at the Prince's Restaurant, Piccadilly, on 24 May, and the Council are very desirous that there should be a large and representative attendance of members of the Institute. A number of distinguished guests are expected. The price of tickets is 15s., for members and for members' guests, exclusive of wines and cigars. Members are requested to give the names of their guests when applying for tickets.

Early application would greatly facilitate the arrangements; and if members would send intimation to the Secretary some days beforehand as to the friends near whom they desire to sit, every endeavour will be made, when arranging the plan of the tables, to meet their wishes as far as possible.

ROYAL COMMISSION ON GREATER LONDON.

On the recommendation of a Joint Committee, composed of representatives of the four Standing Committees and the Town Planning and Housing Committee, the Council have appointed four members to give evidence on behalf of the Royal Institute before the Royal Commission on Greater London.

THE BRITISH SCHOOL AT ROME.

Mr. John W. Simpson, Past President, has been appointed by the Council to represent the Royal Institute for the years 1922-1924 on the Council of the British School at Rome.

THE COAL SMOKE ABATEMENT SOCIETY.

Mr. W. G. Newton has been appointed to represent the R.I.B.A. on a deputation to the Minister of Health.

THE ARCHITECTURAL ASSOCIATION.

A grant of £100 has been made by the Council in aid of the funds of the Architectural Association, and an instalment of £125 of the R.I.B.A.'s donation to the A.A. Endowment Fund has also been voted.

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THE UNIFICATION AND REGISTRATION COMMITTEE.

The following were appointed to serve on the Committee :

- Mr. Walter Cave, F.R.I.B.A.
Mr. E. P. Warren [F.] (Berks, Bucks and Oxon Architectural Association).
Mr. Alan E. Munby [F.] (York and East Yorkshire Architectural Society).
Mr. E. T. Boardman [F.] (Norfolk and Norwich Architectural Association).
Mr. T. Aikman Swan [A.] (Edinburgh Architectural Association).

VISITS TO BUILDINGS OF INTEREST.

The Art Standing Committee are organising a series of visits to buildings of interest during the coming spring and summer. The following visits have already been arranged :—

- Somerset House, Saturday, 29 April 1922.
St. George's Chapel, Windsor, Saturday, 17 June 1922.
Greenwich Hospital, Saturday, 22 July 1922.
Hampton Court, Saturday, 19 August 1922.

It is hoped also to arrange visits to the Bush Building, Aldwych, and to the Port of London Authority Building.

Members desirous of attending should notify the Secretary of their intention not later than ten days before the date on which the visit takes place.

EXHIBITION OF ARCHITECTS' WORKING DRAWINGS.

As the Exhibition of Working Drawings at the R.I.B.A. has been greatly appreciated by students and junior members, at the special request of many of these the period of opening has been extended to 7 p.m. daily (Saturdays 5 p.m.), until the termination of the exhibition.

Arrangements have been made for holding a special students' evening on Wednesday, 15 March, at 8 p.m., in connection with the exhibition. Students from the architectural schools and others are invited to attend. The architects of the buildings, the working drawings of which are exhibited, have kindly consented to be present, and will give students information on special points of interest. No cards of admission are required. Light refreshments will be provided.

SPECIAL ELECTION TO THE FELLOWSHIP.

Mr. William Walcot has been elected a Fellow of the Institute under the provisions of Bye-law 12.

BOARD OF ARCHITECTURAL EDUCATION. R.I.B.A. ALTERATION IN PROBATIONERS' QUALIFICATIONS.

Applicants desirous of qualifying for registration as Probationers R.I.B.A. must in future produce drawings showing an elementary knowledge of freehand drawing instead of examples of geometrical, perspective and freehand drawing.

RESIGNATION OF LICENTIATE.

Mr. Thomas B. Horsfield has resigned his Licentiate-ship of the Institute.

MASONIC MEMORIAL BUILDING.

A meeting of Members and Licentiates of the Royal Institute of British Architects, who are also Freemasons, will be held at No. 9 Conduit Street, W.1, on Thursday, 23 March 1922, at 5 p.m., to consider the proposed Memorial and, if thought fit, to move a resolution to be forwarded to the Grand Secretary.

In view of the great importance of the proposal, it is hoped that everyone who is qualified will attend and will notify the Honorary Secretary, R.I.B.A., P.M. 1328, at 9 Conduit Street, not later than Saturday, 18th inst., stating their Lodge and qualifications.

THE LIGHTING OF PUBLIC BUILDINGS.

At the invitation of the Council of the Illuminating Engineering Society, the Council of the R.I.B.A. desire to inform their members that there will be a discussion on the subject of "The Lighting of Public Buildings" at 8 p.m. on Tuesday, 28 March. The meeting will be held at the House of the Royal Society of Arts (18 John Street, Adelphi). A summary of "Experimental Work and Results" will be presented by Messrs. J. W. T. Walsh, M.A., H. Buckley, B.Sc., and E. H. Rayner, Sc.D., of the National Physical Laboratory. Captain W. J. Liberty, Public Lighting Inspector to the City of London, will deal with various "Decorative Interiors" of Town Halls, etc.

Any members who would care to take part in the discussion are asked to send their names to the Secretary R.I.B.A. as soon as possible, and all members of the Royal Institute are cordially invited to be present.

Competitions

COMPETITIONS OPEN.

- Auckland War Memorial.
R.I.B.A. Colour Competition.
Dundee War Memorial.

The conditions and other documents relating to the above competitions may be consulted in the Library.

Allied Societies

NORTHERN ARCHITECTURAL ASSOCIATION.

The President, Mr. Paul Waterhouse, visited Newcastle-on-Tyne on 21st February, and was entertained at dinner by the President of the N.A.A. (Mr. T. R. Milburn), at which there were present the Lord Mayor of Newcastle (Alderman R. H. Millican), members of the Council of the N.A.A., and other guests. Apologies for absence were received from Major Harry Barnes, M.P., Mr. Ian MacAlister (Secretary R.I.B.A.), and Professor Hatton (Armstrong College).

Mr. T. R. Milburn again presided at the general meeting held at the rooms of the Northern Architectural Association, when there was a large attendance of members. Introducing Mr. Waterhouse, Mr. Milburn said a visit from the President of the R.I.B.A. marked an epoch in the history of the Northern Association. There had lately been a great deal of talk about the unification of the R.I.B.A. and allied societies, and following upon his predecessor in office (Mr. Simpson), no one had done more to secure that than had Mr. Waterhouse.

The allied societies were probably more important than any other section of the profession, since, roughly speaking, they represented 3,500 members out of 4,500. Although they were not all members of the R.I.B.A., everything was leading up to that. There had never been a better feeling nor closer touch amongst members of the profession than that which had been brought about by the visits of Mr. Waterhouse to the country members.

Mr. Waterhouse, in the course of his speech, said it was a great pleasure to him to visit the Allied Societies of the Institute, because there was a real brotherly feeling amongst architects. That feeling was especially strong between those in London and those who belonged to allied societies outside London. He believed that the non-metropolitan people had not always understood how much they were appreciated in London, and London had not always realised what they derived from the friendship of the allied societies.

The strength of the Institute lay not in London, but in the vast group of men who represented the interests of architects not only in England, but throughout the world. The Institute had so grown that it had become imperial, with allied societies in every quarter of the British Dominions—Australasia, Africa, India and Canada—and in the outlying places of the world, such as Hong Kong. Beyond doubt the Institute was the finest architectural society in Europe. The growth of the organisation brought its responsibilities to those associated with the Institute, and they had to make the idea of empire a solid one.

Perhaps nothing within the purely British sphere of the Institute had shown the solidarity and brotherhood of the corporate body more clearly than the movement towards unification. There had been some misunderstanding about that scheme, and he wished to make it clear that it was not a scheme started by some faddist in London, or that it was fostered by the Council in London. The scheme had its origin amongst the general body of the profession.

To his mind, said the President, unification was a fine thing, though the scheme might be complex, and might involve the sacrifice of some principles.

Everybody had a right to express their opinions, but he felt that the critics of the unification scheme had launched their criticisms before the scheme was born. He therefore proposed, with the approval of the Council, to issue a statement upon the whole movement.

Whilst holding definite views upon unification, his duty, as President, would be to see that the prestige of the Institute was not in any way let down; that no class in the Institute was prejudiced beyond the extent demanded by the spirit of sacrifice. Something had to be given up, but it was his duty to see that the something was not excessive.

BIRMINGHAM ARCHITECTURAL ASSOCIATION.

The eighth general meeting of the Birmingham Architectural Association was held on Friday, 10 February, at the School of Art, Margaret Street, Birmingham. Mr. H. T. Buckland, F.R.I.B.A., took the chair, and Mr. H. G. Watkins, F.R.I.B.A., read a paper on "War Memorials."

Mr. Watkins stated that a war memorial, to be a true memorial, must clearly express its purpose. He therefore ruled out all utilitarian structures, and confined himself to those which are unmistakably war memorials, or, in other words, monuments which are combinations of architecture and symbolic sculpture. These he dealt with historically up to the beginning of the nineteenth century, mentioning particularly the Winged Victory of Samothrace, the Arch of Titus, Trajan's Column, and the Gattamelata statue at Padua. He then dealt with the later monuments, classifying them nationally in order to show how the character and ideals of the nation are exemplified in its architecture and sculpture. Italian memorials, as illustrated by that to Garibaldi, are marked by exuberance and freedom from restraint, typical of the race, while the earlier monuments of the Germans were dignified and scholarly until the teachings of Treitschke and Nietzsche began to take effect, when they became coarse and heavy. Of all the nations, perhaps the French show the truest appreciation of the right combination of architecture and sculpture, while English monuments, though dignified and correct, are rather dull and lacking in imagination.

Coming to memorials erected as a result of the Great European War, the first one mentioned was that to Nurse Cavell, which, in the speaker's estimation, is not a success. The outstanding feature of the great movement to erect war memorials in this country has been the universality of the smaller monuments and the multiplicity of these in our villages, churches, clubs, etc. As an inevitable result of the tendency to erect these smaller monuments, few of the larger and more elaborate types have arisen, and nationally none of the various grandiose suggestions have yet materialised. Instead we have the Cenotaph in Whitehall and the simple slab over the grave of the Unknown Warrior in Westminster Abbey, both of which have taken such a hold upon the imagination of the people that it is doubtful whether any magnificent national memorial could now be erected which would make the same appeal.

As regards the vexed question of sites for war memorials, the lecturer thought that a large symbolic monument may well be placed in an open square, provided that there

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is a suitable background, but the smaller monuments are better placed in unobtrusive surroundings.

In conclusion, Mr. Watkins showed a slide of a great arch which it is proposed to erect on the Bar-le-Duc to Verdun road. The sides of the arch are to have bands of sculpture, illustrating the endless procession of automobiles and French troops hurrying to the defence of Verdun. Mr. W. Haywood, F.R.I.B.A., proposed a vote of thanks to the lecturer, which was seconded by Mr. H. W. Hobbiss, A.R.I.B.A.

ULSTER SOCIETY OF ARCHITECTS.

The Ulster Society of Architects has recently published the report of the Council for last year. The report deals with the question of the establishment of closer relations with the Institute and with the Royal Institute of the Architects of Ireland, the new Parliament Houses and the new Law Courts for Northern Ireland. The Registration Committee of the Society has completed the draft of a Bill for presentation to the Northern Parliament, but has had to postpone further action pending the completion of incorporation. The Education and Publicity Committee have been very active during the year and have been instrumental in establishing the Ulster Atelier for the junior members of the profession. Steps have been taken in regard to the assistance of the Society in the Architectural Section of the Degree of Science at Queen's University. On the occasion of the Royal visit to Belfast the Council was asked to prepare a scheme for decorating the city, which was carried out. The Council has been kept in touch with the Central London Committee on Unification through Mr. N. Fitzsimons. Progress has been made and a scheme devised to bring all architects within the United Kingdom together. Mr. R. M. Young [F.] has been appointed President of the Society for 1922.

BERKS, BUCKS AND OXON ARCHITECTURAL ASSOCIATION.

The following are taken from notes of minutes of Council meeting of the above Society held on 20 January :—

RECORD OF MEASURED DRAWINGS, ETC.

Arrangements are being made to keep a record of measured drawings and illustrations of historical and interesting old buildings in Berkshire and surrounding districts. To make the record as complete as possible, members are invited to send to the Hon. Librarian, Mr. H. Whiteman Rising, 154 Friar Street, Reading, particulars of any suitable measured drawings or illustrations they possess, or any of whose existence they are aware in private collections, with particulars of where the drawings can be inspected, and, when possible, notes of any books or records containing accounts of the building. Members are also asked to send to Mr. Rising particulars of any old buildings of which it would be advisable to have measured drawings prepared and photos taken for record purposes, especially those which are likely to be demolished shortly, so that a record can be obtained before they are destroyed. It is proposed to prepare a list of buildings of which measured drawings are required, when the Society will offer special prizes for measured drawings of these buildings. In conjunction with this scheme the Local Authorities have arranged for photographs to be taken of interesting buildings in Reading which are threatened with destruction.

Best Building.—The Reading Society announced that it had been arranged to distinguish annually the best building erected in Reading, should one of sufficient merit be erected. A sub-committee, consisting of the President, the Chairman of the three Branch Societies, and a member of the Royal Institute Art

Standing Committee, was appointed to consider the question and draw up a scheme.

Unification and Registration.—The Association does not commit itself to any definite policy until the policy of the R.I.B.A. is clearly defined. The President has undertaken to consult the President of the R.I.B.A. on this matter.

Governor of University College.—The President, Mr. Edward P. Warren, been elected a Governor of University College, Reading, to represent the Association.

THE NOTTINGHAM AND DERBY ARCHITECTURAL SOCIETY.

A general meeting of the Society was held at Derby on Tuesday, 14 February, and a large number of members were present under the chairmanship of the President, Mr. A. Eaton, M.S.A.

Mr. G. Salway Nicol [F.] delivered a lecture on "The Towers and Domes of Italy."

Mr. Nicol said the domes of Italy are a distinctive feature of the Renaissance times, and almost every city and many villages possess one or more examples of this wonderful architectural feature.

The gradual evolution of domical structures is to be traced from very early times principally in the East, but no examples of these remain except of very modest dimensions.

The Romans of classic times have, however, left us the largest of all domes, the vast saucer-shaped roof of brick and concrete which spans a circle of 140 feet diameter called the Pantheon, and it is remarkable that this great achievement should be the only building of its kind left to us. This dome is built on a circular wall, 20 feet thick, which replaced an open colonnade of an earlier building.

The Byzantine architects were the first to dare to place such a roof on a system of arches and pendentives, and a fine example of such work is St. Mark's Church in Venice, where very considerable areas are vaulted with arches, domes, and semidomes. It was not, however, until the Renaissance was fully developed that we had the dome perfected and lifted to a great height, forming the dominant feature of such churches as St. Peter's at Rome, the Duomo at Florence, San Biagio at Montepulciano, and Santa Maria della Salute in Venice.

These very noble buildings have not received the attention they deserve from Englishmen, largely on account of the narrow and prejudiced outlook of such popular critics as John Ruskin, who so wrongly condemned the whole Renaissance movement in architecture.

No period in the history of building can show more energy, more freedom of thought and daring construction, than that of the great masters of the Renaissance.

The architects were generally both sculptors and painters, and delighted to unite these three arts in the palaces and churches which they built. Such men as Michael Angelo, Peruzzi, Raphael, Bramante, Bernini, have all important buildings to their credit, as well as the sculpture and painting with which they were decorated.

The dome of St. Peter's in Rome is the largest and probably the finest amongst many a score which were built at this time, but it has suffered so much from subsequent alterations and additions that it can only be properly appreciated when some study is given to it to realise what a splendid scheme Michael Angelo conceived, and almost completed, before he died.

Viewed from the north-east this can best be followed, and from this point the great scale of the church has its effect, and the splendid proportions and the refinement of the details appreciated. The main wall of the church is 165 feet high and encloses the sanctuary and transepts, which form three of the arms of the Greek cross, which was the plan of the original design.

This great wall is treated by one of the largest Corinthian Orders in existence, the capitals of which are 10 feet high, and

produces with its dignified and restrained treatment a wonderful effect of might and power. Above this is built the "drum" of the dome, crowned by its great circular cornice to a diameter of about 150 feet. Above this again is reared the "peristyle," which, with its own cornice, carries the cupola itself, which in turn is crowned by a very elaborate and beautiful lantern. These simple but magnificent features attain a height of about 440 feet, or twice the height of the towers of York or Durham. These great masses piled one above the other are not mere size, but are designed with the greatest skill in beauty and refinement. Unfortunately, the plan was altered in later times and much of the effect destroyed; the portico and the smaller supporting domes have never been executed as designed by Michael Angelo.

Leading up to this design are many smaller schemes, notably Bramante's little dome, San Pietro in Montorio, San Gallo's domed church in Montepulciano, and many others, which served as experiments for St. Peter's. The children of St. Peter's are very numerous, and include the domes of Paris, London and Washington, and many have combined with them a system of small domes and towers, such as at Venice, whose Santa Maria della Salute figures perhaps more than any other building in the world on the painter's canvas.

These buildings will repay careful study and contemplation equally with the great Gothic cathedrals, and they will be found to express broader and nobler thoughts in a language of greater tradition and dignity.

The lecture had been arranged by the Society in order to interest the public in the beauties of architecture.

NORTHERN ARCHITECTURAL ASSOCIATION.

The Senate of the Durham University has sanctioned the arrangements with regard to the commencement of a School of Architecture at the Armstrong College, and the Northern Architectural Association has agreed to hand over to the Armstrong College the sum of £460, and to subscribe a minimum of £50 a year towards the expenses of the New School.

NOTES BY THE PRACTICE STANDING COMMITTEE.

On the evening of 8 February the members of the Practice Committee, by the kindly hospitality of the Chairman, Mr. John Slater, dined with him at the Athenæum. In addition to the Committee, there were also present Mr. Paul Waterhouse (President), Sir Reginald Blomfield, R.A. (Past President), Mr. A. W. S. Cross (the late Chairman of the Committee), Mr. Ian MacAlister (Secretary of the Institute), and Mr. H. Godfrey Evans (Assistant Secretary). The President, in proposing the health of Mr. Slater, referred to the inexhaustible youth and energy of their host, who, after unequalled services to the profession in connection with architectural education, was still prepared, at a time when most men would think only of their own leisure, to carry out the onerous duties of Chairman of the Practice Committee. Mr. Slater, in his reply, spoke of the large amount of work which fell to the lot of the Committee, and, in alluding to the labours of the members, expressed particularly his appreciation of the fact that a man of the high official position of Mr. Topham Forrest (Architect to the London County Council) was with them as a member of the Committee to place his knowledge and experience at the service

of his brother architects. Mr. Topham Forrest, in response, stated that he was pleased to serve on the Committee, and that in his relations with architects in his official capacity he felt it both a duty and a pleasure to do everything in his power to assist his professional brethren.

THE SOCIETY OF ARCHITECTS' PRESIDENT.

Mr. Edwin J. Sadgrove [F.] has been co-opted by the Council of the Society of Architects as President for the remainder of the unexpired term of office rendered vacant by the resignation of Sir Charles T. Ruthen. Mr. Sadgrove is one of the Society's representatives on the R.I.B.A. Unification Committee, the Building Trades Parliament, the Architects' and Surveyors' Approved Society, the Beaux-Arts Committee, and is President of the Institute of Arbitrators.

Mr. Keith D. Young, F.R.I.B.A., having resigned his appointment of Architect to the Middlesex Hospital, has been appointed Consulting Architect by the Weekly Board. Mr. Alner W. Hall, M.C., F.R.I.B.A., has been appointed Architect to the Hospital, as from 1 January last.

Obituary

LORD HARCOURT.

Viscount the Right Hon. Lewis Harcourt, P.C. (elected Hon. Fellow in 1910), died suddenly at his London residence on 24 February. Lord Harcourt, who was born in 1863, was the son of the late Sir William Harcourt, the well-known Gladstonian statesman. His first position as a Minister after his election to Parliament was First Commissioner of Works, and in this office he delivered his maiden speech. In 1910 he was promoted from the Office of Works to succeed Lord Crewe as Secretary of State for the Colonies. When the Coalition was formed in 1915 he returned to the Office of Works. Mr. Harcourt was made a Privy Councillor in 1905 and was raised to the peerage in 1916. Appointed a Trustee of the Wallace Collection in 1911 and of the British Museum and National Portrait Gallery in 1913 and 1916, he was also a member of the Council and Executive of the British School at Rome and an Honorary Fellow of the R.I.B.A.

SMITH: THOMAS MARSHALL, elected an Associate in 1902, died on 20 February 1922.

EMMETT: H. A., elected a Licentiate in 1911, died on 6 March 1922.

EDLIN: V. A., elected a Licentiate in 1911.

In the obituary notice of Mr. Sidney John Dicksee in the last number of the JOURNAL the second contributor was Mr. W. A. Pite [F.], not Mr. A. B. Pite. Mr. Bernard J. Dicksee [F.] states that he was the cousin, not the brother, of the deceased.

Probationers R.I.B.A.

(Continued from p. 260 in the last JOURNAL.)

Since 1 August 1921 the following have been registered as Probationers of the Royal Institute:—

- SCOTT: FREDERICK, 7 Eleanor Street, Cullercoats, Northumberland.
 SHAW: CHARLES CECIL, 1 Holly Road, Northampton.
 SHAW: MYFANWY, 73 Holyhead Road, Handsworth, Birmingham.
 SHROFF: LOVJI FRAMDOZ, 34 Westbourne Road, Barnsbury, N.7.
 SILCOCK: FRANCES THELMA, "The Cross," Hayton, Lancs.
 SMITH: HARRY HIRST, 6 Hereford Road, Southport.
 THOMPSON: GERALD LEOPOLD, Park House, Park Terrace, Newcastle-on-Tyne.
 TROKE: WALTER EDMUND, "Fairlight," 31 Malmesbury Road, Southampton.
 TURNER: MAX DUNCAN, Bridge House, Shepley, near Huddersfield.
 TURNER: RALPH HENRY, "Claremont," St. Andrew's Road, Bridport, Dorset.
 TURNER: WILLIAM JAMES, 11 St. James Terrace, Morpeth.
 TYDEMAN: ARTHUR EDGAR, 15 Lansdowne Gardens, S.W.8.
 TYLER: ERIC BRIAN, 10 Archer Road, Penarth, Glam.
 TYNDALL: DONALD ALFRED, 2 Eaton Square, Monkstown, Co. Dublin.
 WALL: MAUD AMY MARGARET, Kent House, Oxton, Cheshire.
 WESKER: SEPTON ERNEST ELLARD, 4 Beckenham Road, New Brighton, Cheshire.
 WESTGATE: RICHARD MOSS, "Erinville," 37 St. Leonards Road, Norwich.
 WHEELER: HARRY, Brockley House, Endwell Road, Bexhill-on-Sea.
 WHINNEY: HUMPHREY CHARLES DICKENS, 7 Strathray Gardens, Eton Avenue, N.W.3.
 WILLIAMS: EDWIN, 201 Edge Lane, Liverpool.

Members' Column

Members, Licentiates, and Students may insert announcements and make known their requirements in this column without charge. Communications must be addressed to the Editor, and be accompanied by the full name and address. Where anonymity is desired, box numbers will be given and answers forwarded.

LOST.

A Thesis entitled "Modern Methods of Construction, more particularly regarding School Buildings and Housing"; was lost after the Final Examination in June last. Any information which will lead to its recovery will be welcomed by the Secretary R.I.B.A.

OFFICES TO LET.

OFFICES to Let, one medium-sized room, one small room, at No. 12, Hart Street, W.C.—Apply Housekeeper, No. 16, Hart Street, W.C.1.

PARTNERSHIPS.

A.R.I.B.A., of exceptional experience, including quantities, who has carried out large and important works, and has works in view; desires a partnership in an office with good prospects.—Address Box No. 879, c/o Secretary R.I.B.A., 9 Conduit Street, W.1.

ASSOCIATE, 39 years of age, is desirous of a partnership or employment as assistant with a view to partnership. Special experience in domestic work, schools, hospitals and commercial premises. Previously with well-known London architect. Relinquished during the war an appointment as County School Architect. London or Home Counties preferred. Highest references and credentials.—Box 8322, c/o Secretary R.I.B.A., 9 Conduit Street, London, W.1.

ASSOCIATE desires to purchase partnership in London firm. Ten years' experience, 2½ years' practice.—Apply Box 6322, c/o Secretary R.I.B.A., 9 Conduit Street, W.1.

APPOINTMENTS WANTED.

A.R.I.B.A. desires responsible post, town or country; 24 years' varied experience in general work, and interior decoration of houses and ocean liners. Good practical knowledge in all branches. With present employers since 1912 (2 years' war service). Leaving solely through lack of work.—Apply Box 666, c/o Secretary R.I.B.A., 9 Conduit Street, W.1.

F.R.I.B.A., 8 years' practice before the war, 5 years' war service (Lt.-Col. R.E.), since engaged in an official capacity as architect to a large Housing Scheme, wishes to enter established firm with a view to partnership. Has some connection and some work in prospect.—Apply Box 7322, c/o Secretary R.I.B.A., 9 Conduit Street, W.1.

Minutes XII

SESSION 1921-22.

At a Special General Meeting, held on Monday, 6 March 1922, at 8 p.m., Mr. Paul Waterhouse, President, in the chair. The attendance book was signed by 56 Fellows (including 12 members of the Council), 35 Associates (including 3 members of the Council) and 3 Licentiates.

The Minutes of the Special General Meeting held on Tuesday, 7 February, having been published in the JOURNAL, were taken as read and signed as correct.

The President announced the object of the Meeting—viz., to elect the Royal Gold Medallist for the current year.

On the motion of the President, it was RESOLVED, by acclamation, that, subject to His Majesty's gracious sanction, the Royal Gold Medal for the promotion of Architecture be presented this year to Mr. Thomas Hastings of New York, in recognition of the merit of his work as an Architect.

The Special General Meeting then terminated.

At the Ninth General Meeting (Business) of the Session 1921-1922, held on Monday, 6 March 1922, immediately after the Special General Meeting above recorded, and similarly constituted, the Minutes of the Meeting held on 20 February, having been published in the JOURNAL, were taken as read and signed as correct.

The Hon. Secretary announced the decease of the following members:—

The Rt. Hon. Viscount Harcourt, P.C., who was elected an Hon. Fellow of the Institute in the year 1910, and Mr. Thomas Marshall Smith, who was elected an Associate in the year 1902.

It was RESOLVED that the regrets of the Institute for the loss of these members be recorded on the Minutes of the Meeting and that a message of condolence and sympathy be conveyed to their relatives.

The following member attending for the first time since his election was formally admitted by the President:—

Mr. John Batty, Associate.

The following candidates were elected to membership by show of hands under Bye-Law 10:—

AS FELLOWS (6).

- LENTON: FREDERICK JAMES, M.C. [A. 1912], Stamford.
 PICTOR: ARTHUR JOHN [A. 1894], Bruion, Somerset.
 THOMAS: PERCY EDWARD, O.B.E. [A. 1920], Cardiff.
 TRAYLEN: HENRY FRANCIS [A. 1899], Stamford.
 WALKER: JOHN WILSON [A. 1905], Aberdeen.
 WILSON: ROBERT GORDON, Junr. [A. 1902], Aberdeen.

AS ASSOCIATES (88).

- ALLEN: JOSEPH STANLEY [Special War Examination], Birkenhead.
 ALLISON: FREDERICK WILLIAM HARFORTH [Special War Examination], Haintgate.
 ALLSFORD: ERNEST HAROLD [Special War Examination].
 BARNARD: HAROLD THOMAS BENJAMIN [Special War Examination].
 BARTLETT: PERCY JAMES [Special War Examination], Bristol.
 BEASLEY: ALBERT [Special War Examination], Nottingham.

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- BEAUMONT : EUGENE EDWARD [Special War Examination].
 BECK : HENRY BERKELEY [Special War Examination], Stafford.
 BLOOMFIELD : EDWARD HAMILTON [Special War Examination].
 BLOOMFIELD : HENRY LANCELOT [Special War Examination].
 BOWLING : JOHN VALENTINE [Special War Examination].
 BRANSON : PERCY KENNETH [Special War Examination], Leicester.
 BROOKS : LESLIE CLIFFORD [Special War Examination].
 BROWN : FRANK COLLIN [Special War Examination].
 BROWN : GEORGE TALBOT [Special War Examination], Sunderland.
 BUMPSTEAD : ALBERT DENNIS, P.A.S.I. [Special War Examination].
 BURNETT : EDGAR [Special War Examination], Melton Mowbray.
 BURNETT : FREDERICK WANDLASS, M.C. [Special War Examination], Penarth, Glam.
 BYROM : RICHARD [Special War Examination], Bury, Lancs.
 CARTER : WILLIAM [Special War Examination], Sunderland.
 CHALLICE : JOHN [Special War Examination], Exeter.
 CHECKLEY : GEORGE [Special War Examination], Prenton, Cheshire.
 CLARK : SIDNEY CHARLES [Special War Examination].
 COGSWELL : VICTOR GORDON [Special War Examination], Portsmouth.
 COLE : ERIC [Special War Examination], Cheltenham.
 COOK : HERBERT JAMES [Special War Examination], Sunderland.
 CORDINGLEY : REGINALD ANNANDALE [Special War Examination], Sale, Cheshire.
 COTTON : GILBERT HENRY [Special War Examination].
 COUCHMAN : HAROLD WILLIAM [Special War Examination].
 COWTAN : ALBERT CHARLES [Special War Examination].
 CREGAN : EDGAR WILSON [Special War Examination].
 DETMOLD : FREDERICK GUY [Special War Examination].
 EDWARDS : WILFRID BYTHELL [Special War Examination], Flint, N. Wales.
 FIELDER : GEORGE HAROLD [Special War Examination].
 GRANGER : WILLIAM FRASER [Special War Examination].
 GREENWOOD : JAMES HENRY [Special War Examination].
 GRIFFITH : HUGH NICHOLAS [Special War Examination], Southport.
 GUY : WALDO EMERSON [Special War Examination], Claverley, Shropshire.
 HAIRD : TOM WILLIAM [Special War Examination], Leicester.
 HARDING : FRED HAROLD [Special War Examination], Leicester.
 HAUGHAN : JOHN HOLLIDAY [Special War Examination], Silloth, Cumberland.
 HEARD : GORDON THOMAS [Special War Examination].
 HOLLIDAY : ALBERT CLIFFORD [Special War Examination], Liverpool.
 HOWELLS : DAVID JOHN [Special War Examination], Swansea.
 HUNT : REGINALD [Special War Examination], Oxford.
 HUNTER : HARRY CORNELIUS [Special War Examination].
 JOHNSON : CAMPBELL MCALPIN CAMERON [Special War Examination], Gloucester.
 JONES : REGINALD HERRERT ANDREWS [Special War Examination].
 JONES : RONALD HUGH [Special War Examination], Neath, S. Wales.
 JONES : TOM LEONARD [Special War Examination], Newport, Mon.
 KEESEY : WALTER MONCKTON, M.C., A.R.C.A., A.R.E. [Special War Examination].
 KERR : JAMES AUBREY [Special War Examination], Sydney, N.S.W.
 KIRBY : EDWARD [Special War Examination], Wellingborough.
 KNOTT : ALBERT LESLIE [Special War Examination].
 LANGDELL : GEORGE ARTHUR [Special War Examination].
 LAVENDER : EDWARD PRICE [Special War Examination].
 LEATHAM : JULIAN RUDOLPH [Special War Examination].
 LEWIS : GEORGE STANLEY [Special War Examination], Liverpool.
 LUKE : REGINALD LATHAM [Special War Examination].
 MAHON : SIDNEY EDWARD [Special War Examination], Liverpool.
 MARTIN : NATHANIEL [Special War Examination].
 MAUGER : PAUL VICTOR EDISON [Special War Examination].
 MILLER : CLAUDE ST. JOHN GARLE [Special War Examination].
 MINTY : ROBERT JAMES HUGH [Special War Examination].
 MITCHELL : EDWARD ARNOLD [Special War Examination].
 NEWTON : PERCY MAURICE [Special War Examination], Hull.
 NORTON : CHARLES JOSEPH [Special War Examination].
 OSBALDISTON : GEORGE ALBERT [Special War Examination], Brisbane, Australia.
 OWEN : ARTHUR TREVOR [Special War Examination], New Brighton, Cheshire.
 PENMAN : EDWARD MEADOWS [Special War Examination].
 PRICE : HARRY JAMES PARKIN [Special War Examination].
 PRICHARD : LIONEL ARTHUR GEORGE [Special War Examination], Liverpool.
 REES : VERNER OWEN [Special War Examination].
 REVITT : GEORGE [Special War Examination], Derby.
 RIDGE : THOMAS [Special War Examination], Oswestry.
 RIPPINGHAM : THOMAS FRANCIS [Special War Examination].
 SCRIVEN : CHARLES [Special War Examination].
 SMITH : ALFRED EWART [Special War Examination], Leicester.
 SMITH : CECIL [Special War Examination].
 STURGEON : JOHN HENRY [Special War Examination], Brighton.
 SUTCLIFFE : THOMAS WILFRID [Special War Examination], Rochdale, Lancs.
 THORBURN : RICHARD [Special War Examination].
 TRIMM : CHARLES ALGERSON, M.C. [Special War Examination].
 WALKER : REGINALD BECKWICK [Special War Examination].
 WHITE : CHARLES STANLEY [Special War Examination].
 WILLIAMS : EDWIN [Special War Examination], Liverpool.
 WILLIAMS : HOWARD [Special War Examination], Cardiff.
 WENN : THOMAS JOHN ROSEWAIN [Special War Examination], Truro, Cornwall.

The President stated that the meeting was now open for discussion on the question of Higher Buildings for London, and the Secretary read the following notices of motion which had been received under the provisions of Bye-Law 61 :—

"That this General Meeting of the Royal Institute of British Architects approves the action taken by the Council in connection with the Report of the London Building Acts Committee."

To be moved by Mr. Maurice E. Webb [F.] and seconded by Mr. Raymond Unwin [F.].

"That this meeting approves the general principle of allowing buildings to be erected, in certain positions, to a greater height than is the present practice, subject to proper safeguards as to construction, fire escape, and fire attack."

To be moved by Mr. Delissa Joseph [F.] and seconded by Mr. H. Austen Hall [F.].

The resolution moved by Mr. Webb and seconded by Mr. Unwin was carried by 79 votes to 8. The resolution moved by Mr. Joseph and seconded by Mr. H. Austen Hall was rejected by 51 votes to 12. The following members also took part in the discussion :—

Sir Aston Webb, Past President.
 Mr. Arthur Keen [F.], Hon. Secretary.
 Professor S. D. Adshad [F.].
 Mr. Andrew T. Taylor [R.F.].
 Mr. O. P. Milne [F.].
 Mr. W. R. Davidge [F.].
 Professor A. Beresford Pite [F.].
 Mr. Vernon Crompton [F.].

The Hon. Secretary having announced the dates of future meetings, the proceedings closed, and the meeting terminated at 10.20 p.m.



Notes on the Planning of Sanatoria, Infectious Diseases Hospitals, and other Public Health Institutions

By JOHN WILSON [F.], F.R.S.E., PRINCIPAL ARCHITECT SCOTTISH BOARD OF HEALTH

I. INTRODUCTORY.

THE problem that confronts the architect in dealing with hospitals and kindred public health institutions is how to make the structural life of the building coincide with its useful life.

Owing to the rapid change of medical opinion as to the methods of treating disease and to the constant upward tendency of standards of sanitation, heating, lighting, ventilation, etc., it is not uncommon for comparatively modern buildings that are still good structurally to be out of date. For these reasons the architect is now required to design a public health institution on such simple lines that future alterations can be carried out at a minimum of expenditure. As long as the architect can construct a building that will be weather-proof and comfortable and can be maintained at a moderate cost during the length of its useful life, he is entitled to reduce the initial cost even at the sacrifice of durability. There is further the general need for economy in public expenditure. The heavy financial indebtedness of public bodies, the high initial cost of building and the annual expenditure in maintenance and administration will compel local authorities for years to come to erect only the cheapest possible structures compatible with efficiency.

In mining areas a special consideration operates. Where on account of underground workings it is almost impossible to obtain a firm foundation, it is necessary to erect a building as light in construction as possible, not only to prevent the foundations from

subsiding, but to avoid undue loss in the event of the hospital ultimately becoming uninhabitable. In mining districts, too, the incidence of population fluctuates, and often after the life of a mine has expired the people leave the district. But the effect of this on the uses of an institution is nowadays neutralised to a great extent by the use of the motor ambulance.

The tendency in health administration is towards the establishment of much larger public health areas than at present exist. The effect of this will be that public health institutions will be located in or in the neighbourhood of centres of permanent population rather than in smaller and isolated districts.

SITUATION.—In considering the important matter of the site, the following conditions should be kept in view :—

- (1) Where possible a site of good elevation in relation to the surrounding country should be selected, with, especially in the case of sanatoria, a southern aspect and the ground sloping to the south.
- (2) The site should have a dry subsoil.
- (3) Protection from the prevailing cold winds should be obtained.
- (4) Where available, public water supply and sewers should be used ; if not, a sufficient water supply should be provided and arrangements made to dispose of the sewage without causing nuisance by sewage works.

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- (5) The site should be conveniently accessible to a railway station and main roads, and should where possible and practicable be central for the population and area which the institution is to serve.
- (6) A larger site than is necessary for the original requirements should be obtained in order to permit of any future extensions.

BUILDINGS.—In considering the planning of the buildings it should be remembered that the primary reason for the existence of public health institutions is the treatment of sick persons in such a manner as to ensure early convalescence. Every factor that can increase the efficiency of the institution in this respect must be given the fullest consideration. The saving of unnecessary work for the staff, the placing of utility rooms so that patients in the wards are not disturbed by frequent noises, the provision of efficient lighting and ventilation, and the creation of a sense of comfort by well-considered internal finish, are all factors in planning that favourably influence both patients and staff and add to the efficiency of the institution.

In planning these buildings the architect as well as the doctor must never forget the human side of the patient. A well-known authority has stated that the two essentials of planning are the comfort of the patient and the accessibility of service. I shall now deal with the various classes of institutions in detail, and particularly with those under the control of Local Authorities in Scotland.

II. SANATORIA.

A number of sanatoria have already been erected in various parts of Scotland. Some consist of entirely new buildings placed on a virgin site, but for others an estate with an existing mansion house has been used. The mansion house, as a rule, has been converted for use as an administrative block, but it is questionable whether this arrangement has always proved cheaper eventually than where entirely new buildings have been provided.

Some of the larger Local Authorities provide separate institutions for men and women. For several reasons this is desirable, but on the question of cost it cannot be considered where a comparatively small number of beds is required.

I propose to give some general notes on the preparation of the plans. The sanatorium is assumed to be one to provide for 100 patients. The proportion of the various classes of patient must vary according to the needs of each locality, but the accommodation suggested below is based on the supposition that in the majority of sanatoria approximately 20 per cent. of the beds will be for sick or bed patients.

SITE.—The site to be acquired should provide from one-third to one-half of an acre of land per patient.

BUILDINGS.—The buildings should include the following:—

Pavilions and shelters for patients; an administrative section, with (a) kitchen, dining-rooms for patients and staff; stores and other offices; and (b) staff block, power-house, laundry and wash-house, disinfecter, sputum destructor, mortuary, etc., and outdoor staff buildings.

The best aspect for the pavilions is with the ward windows facing south or south-west.

The following points should receive attention:—

(1) PAVILIONS FOR PATIENTS.

The nature of the accommodation to be provided depends to a certain extent on the class of case that the sanatorium is intended to accommodate, but, broadly, provision should be made for two main classes:—

(a) Cases requiring little or no treatment in bed, sometimes called "ambulant" cases. This accommodation should take the form of separate pavilions for men, women and children (if children are to be dealt with) respectively.

(b) Cases requiring treatment in bed, sometimes called "bed" patients. This accommodation should take the form of pavilions containing small wards. For children there is not the same call for separate provision. It is usual to keep all newly admitted patients under observation in bed for a week or two for diagnosis and classification. A separate pavilion should be provided for these cases. (Figs. 1 and 2.)

In considering plans in detail, special attention should also be given to the following points:—

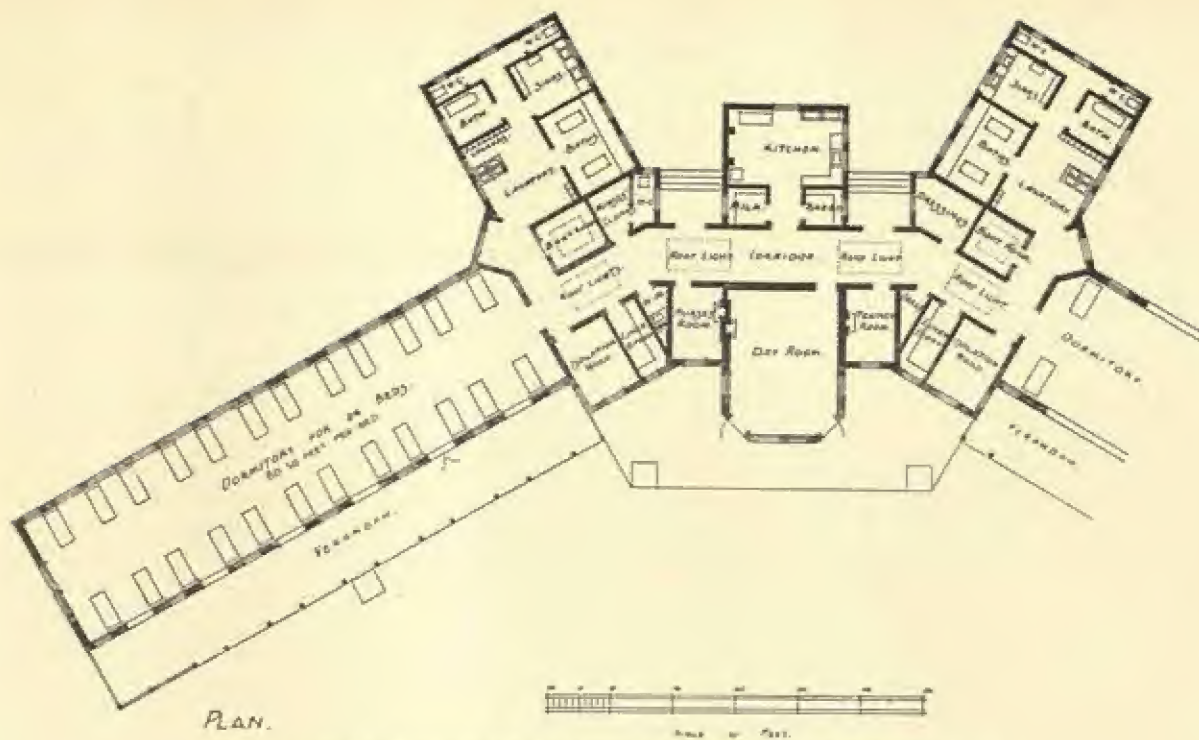
(a) *Standard Floor Areas per Bed.*—One-bed wards, 90 superficial feet; two-bed wards, 80 superficial feet; four, six, eight and ten-bed wards, 80 superficial feet.

For administrative reasons the number of one-bed wards should be small.

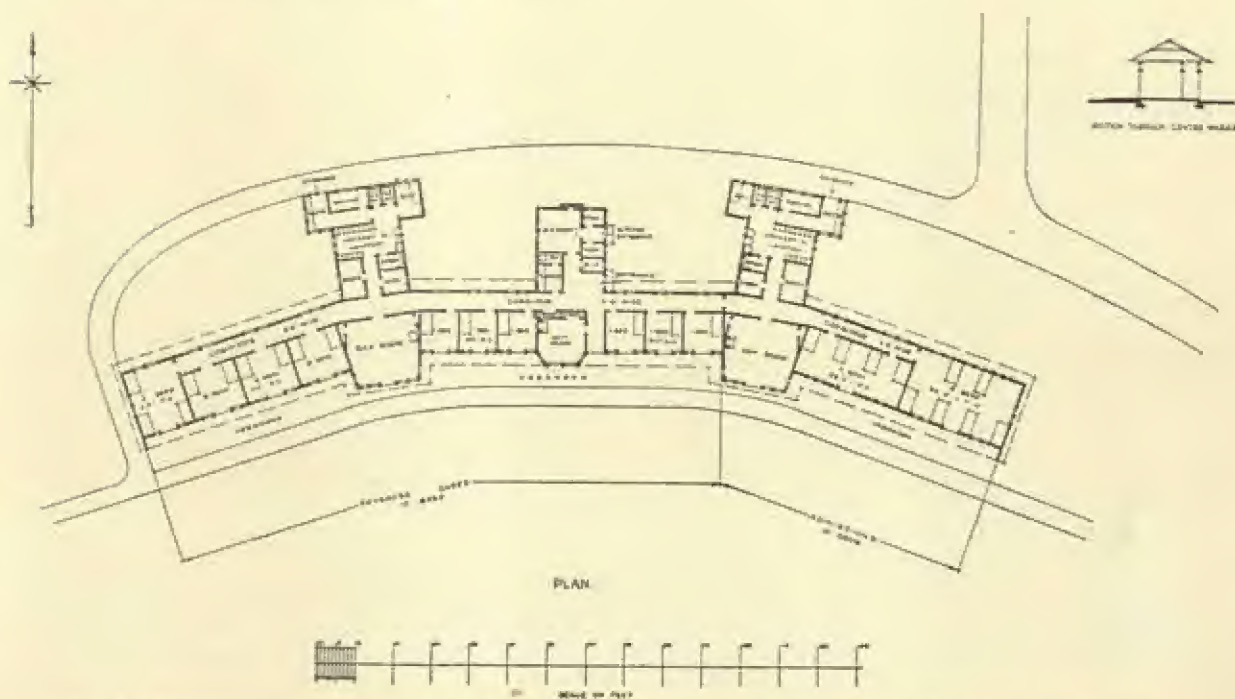
(b) *Height of Ceilings.*—One and two-bed wards, 9 feet; four, six, eight and ten-bed wards, 9 feet 6 inches to 10 feet.

(c) *Sanitary Accommodation in Pavilion for Ambulant Cases.*—Generally, one spray bath should be provided for, say, ten patients. One slipper bath should be provided in each pavilion for male cases; but more will require to be provided for female cases, with a corresponding reduction in the number of spray baths. One w.c. for every ten patients. One lavatory basin for every six patients, and a separate basin for the cleaning of teeth.

(d) *Other Accommodation.*—Sink-room with sinks, slunge, and sometimes sputum steriliser; housemaid's



HOSPITAL AND ADMISSION BLOCK, MALE SIDE.



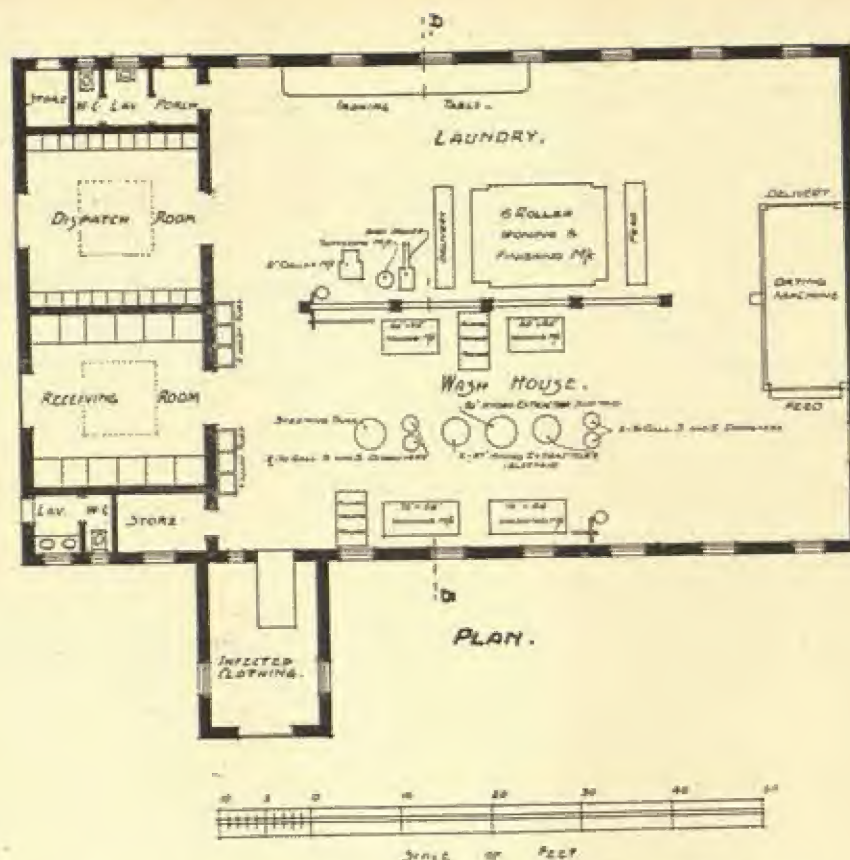


FIG. 3.—LAUNDRY AND WASHHOUSE, MEARNSKIRK SANATORIUM, GLASGOW

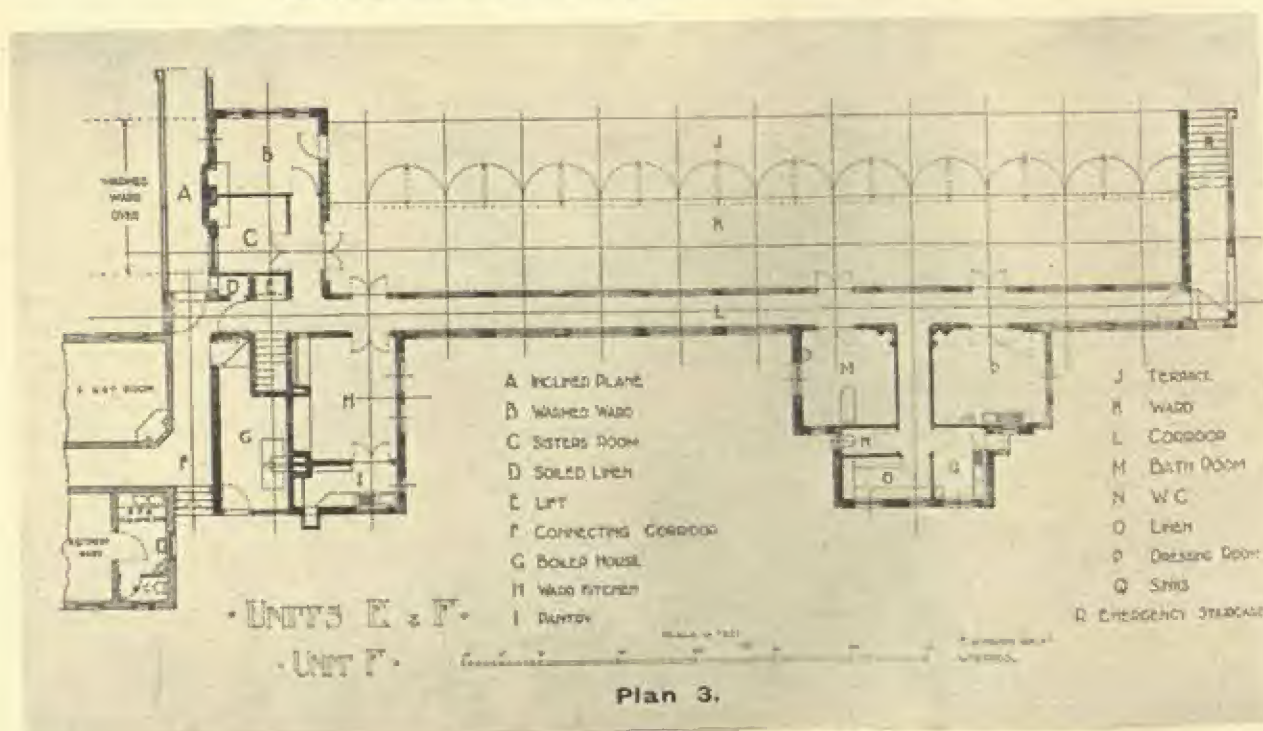


FIG. 4.—THE CHILDREN'S HOSPITAL, LEASOWE, CHESHIRE. PLAN OF PAVILION. ARCHITECT: T. W. HAIGH

closet with sink and slunge; duty-room or ward kitchen; staff lavatory; locker-rooms for patients' clothes, linen-room, drying-room for patients' clothes, bootroom and boxroom for patients' boxes.

The above remarks apply principally to pavilions for ambulant cases. In a pavilion for bed cases the lavatory accommodation will be reduced considerably, and the locker-room, drying-room and bootroom can be omitted, unless it is intended to use the pavilion occasionally for semi-ambulant as well as bed cases.

(e) *Shelters for Patients.*—Some sites are more suitable for shelters than others, but shelters should not as a rule exceed 10 per cent. of the total accommodation for patients. The shelters should be of wood.

(f) *General Observations.*—A 9 feet wide concrete plat may be provided in front and at ends of pavilions. In some cases this plat is without a roof, in others it is covered with a roof extending over one-half of the width. At the French windows to verandahs a 3-inch step should be allowed to prevent weather driving in. Recreation rooms are necessary for ambulant cases, and should be provided either in the administrative block or in conjunction with the dining-room where both are attached to the kitchen block. In pavilions for bed cases a small day-room should be provided. If a children's block forms part of the sanatorium, it will be necessary to have a separate observation pavilion for possible infections. To obtain the best possible results the pavilion should be planned on the cubicle system—each cubicle containing one or two beds. All buildings should be planned to permit of any future extension. The pavilions may be of one storey and of light construction. Workshop facilities should be provided with a view to affording interesting and useful occupational treatment and, in suitable cases, vocational training.

(2) ADMINISTRATIVE SECTION.

(a) *Kitchen Block* (one-storey building).—Kitchen, scullery, vegetable scullery, larders, dry stores, bread stores, fish store, meat store, milk-room, office, coal store, bootroom and lavatory, patients' dining hall (with a floor area of 10 superficial feet per patient), men's cloakroom, women's cloakroom, servery and pantry with sinks for washing up, a nurses' dining-room, a maids' dining-room with a wash-up pantry adjoining in which the staff crockery is kept.

(b) *Staff Block* (two or three-storey building).

Ground Floor.—Entrance vestibule, with corridors 5 feet wide, office and visitors' room, consulting-room, X-ray room, dark-room off consulting-room, patients' dressing-room off consulting-room, patients' waiting-room, dispensary, laboratory and lavatory. Matron's sitting-room, bedroom and bathroom. Resident doctor's sitting-room, bedroom and bathroom. Small

servery for the preparation of doctor's and matron's meals. In the larger sanatoria a medical superintendent's house may be necessary. Nurses' sitting-room, maids' sitting-room, sewing-room, lavatories, boxroom, linen stores, etc.

1st and 2nd Floors.—Nurses' and maids' bedrooms. Sick-rooms for nurses and maids. Where separate bedrooms are provided these should have a floor area of 100 superficial feet. Nurses' and maids' lavatories containing a minimum of one bath to ten, one w.c. to ten, and one basin to four persons. Housemaids' closet, boxroom, linen store.

(c) *General Observations.*—In place of having wash-hand basins in staff bedrooms, it has been found more convenient to provide suitable lavatories with basins. This arrangement has been found to work satisfactorily and obviates the labour of removing slops from each bedroom. A certain number of cubicle bedrooms may be provided for probationer nurses and maids. Each nurse or maid should have either a separate bedroom or cubicle, and double-bedded rooms should be avoided.

It is worth consideration whether it will not be more economical at the beginning to provide extra accommodation for nurses and maids to meet the needs of a future extension of bed accommodation for patients. In infectious diseases hospitals extra accommodation for nurses and maids is always required during an epidemic, when possibly double the sanctioned number of patients are placed in the wards.

(d) *Number of Nurses to be provided for.*—The following table gives the approximate number of nurses and maids necessary for various classes of institutions, though these notes apply more to No. 2 class of institution.

	Nurses. Beds.	Maids. Beds.
1. Tuberculosis Hospitals ..	1 to 6	1 to 8
2. Tuberculosis Hospital plus Sanatorium ..	1 to 8	1 to 8
3. Sanatorium proper ..	1 to 10	1 to 10
4. Sanatorium plus Work Colony	1 to 12	1 to 20
5. Work Colony ..	1 to 20	1 to 20

(3) POWER-HOUSE AND LAUNDRY BLOCK. (ONE-STOREY BUILDING.)

(a) *Power-house.*—Boiler-house, heating plant room, electric plant room, battery room, engineers' workshop, mortuary, garage, outside lavatory, destructor, coal store and petrol store (detached).

(b) *Laundry.*—Receiving-room, infected clothes apartment with disinfectant, wash-house, drying-room, laundry, dispatch-room, lavatory accommodation and small store. There is no necessity to have separate accommodation for staff linen, as this can be dealt with on a separate day if necessary. (Fig. 3.)

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(4) OUTDOOR STAFF BUILDINGS.

Workmen's houses with three or four apartments and scullery, bathroom, larder, coal cellar. The construction to be of brick.

(5) ACCOMMODATION FOR THE TREATMENT OF NON-PULMONARY CASES AMONG CHILDREN.

A separate pavilion on the lines of those for ambulant cases should be provided. It is possibly advisable not to plan the wards to accommodate more than 20 cots. In some cases 40 cots have been provided in one ward. This arrangement facilitates supervision and provides a suitable number of bed pupils for two teachers.

The depth of these wards should not be less than 11 feet, and the width of the verandah in front should be about 10 feet. The sun balcony or verandah should be partly roofed to the extent of about 5 feet. The front wall of the ward should be fitted with doors opening in two sections, solid wood in the lower and glazed in the upper section. In some sanatoria these pavilions are of two storeys—girls on one floor and boys on the other.

A small operating theatre block should be attached to this pavilion. It should contain an operating theatre about 15 feet by 15 feet, a sterilising room, an anaesthetising room or corridor outside the theatre, a preparation room for nurses, a plaster room, an X-ray and dark room, a small surgical dressing room, and the necessary lavatories. The operating room should be lighted from the north with the window extending to the ceiling. I would suggest that possibly the best floor for an operating theatre is smooth vitreous tile of a dark tone or terrazzo laid in small panels. The walls should be finished with hard-wall plaster treated with a flat enamel paint. Sometimes the walls for a height of 6 feet are tiled.

A dining-room and playroom may be provided for the children who can move about, but the majority will have meals in the wards.

The modern pavilions of the Maritime Hospital at Berck-Plage, France, are well planned, and the most recently erected hospital for surgical tuberculosis among children in England—the Liverpool Hospital for Children at Leasowe—is planned on somewhat similar lines. (Fig. 4.)

SANATORIA IN THE UNITED STATES.—Within the last few months the design of sanatoria in the United States has been receiving a good deal of consideration from the Public Health Services, and it is interesting to compare American planning with our own. In the United States, as the climate varies from sub-tropical to cold, a considerable diversity of plan is required. The plans issued recently for pavilions in a cold climate are very interesting. The pavilions for semi-ambulant and ambulant cases are built of two storeys, and each accom-

modates 48 beds. The semi-ambulant pavilions have the sitting or day room with the sanitary annexe in the centre, and the wards on either side are entered from an external corridor. The wards are formed into four-bed units, and between the centre pair of beds there is a stall partition 7 feet high, 9 feet from front to back, and 9 inches from the floor. The beds are arranged in pairs, with not less than 4 feet 6 inches between them, except as above described where a stall partition is formed.

A bedside locker is provided in the ward, but the wardrobe for dressing-gown, etc., is placed in the corridor. Heating is provided in the day-room and sanitary annexe, but none is allowed in the wards. The apartments provided in the sanitary annexe are as follows: a nurses' room, a utility or sink room, a wash-room with basins, slipper and spray baths, w.c.'s, linen-room, room for patients' boxes, occupational therapy store, diet kitchen and dining-room. As plugs are omitted from the basins and simple mixing taps installed so that ablutions are performed in running water, no dental basins are provided.

The ambulant pavilion is similar in general plan and arrangement to the semi-ambulant pavilion, but differs in the following respects: the diet kitchen, dining-room and sink-room are omitted. The usual nurses' room is not provided in every pavilion, as one nurse usually supervises several ambulant pavilions. The wards are for two beds, with one four-bed screened sleeping porch to serve two adjacent wards. Each ward has a window opening directly to the outside and not to the screened porch. This arrangement, known as the cottage type, has been adopted to meet the desire of ambulant patients for greater privacy than is obtained in open wards. (Figs. 5 and 6.)

III. ISOLATION HOSPITALS FOR INFECTIOUS DISEASES.

SITE.—The size of the site varies considerably, according to the number of single or double-storey pavilions. The number of bed patients per acre runs from 15 to 20.

HOSPITAL BUILDINGS.—These consist of three classes:

- (1) Ward blocks for the reception of the sick.
- (2) Administrative block for staff and stores.
- (3) Offices—*i.e.*, laundry, wash-house, boiler-house, mortuary, etc.

It is desirable that the ward blocks should be placed 40 feet from each other or any other buildings, and at least the same distance from the boundaries of the site.

The best aspect for the ward blocks is usually with the windows facing a few points east of south and west of north.

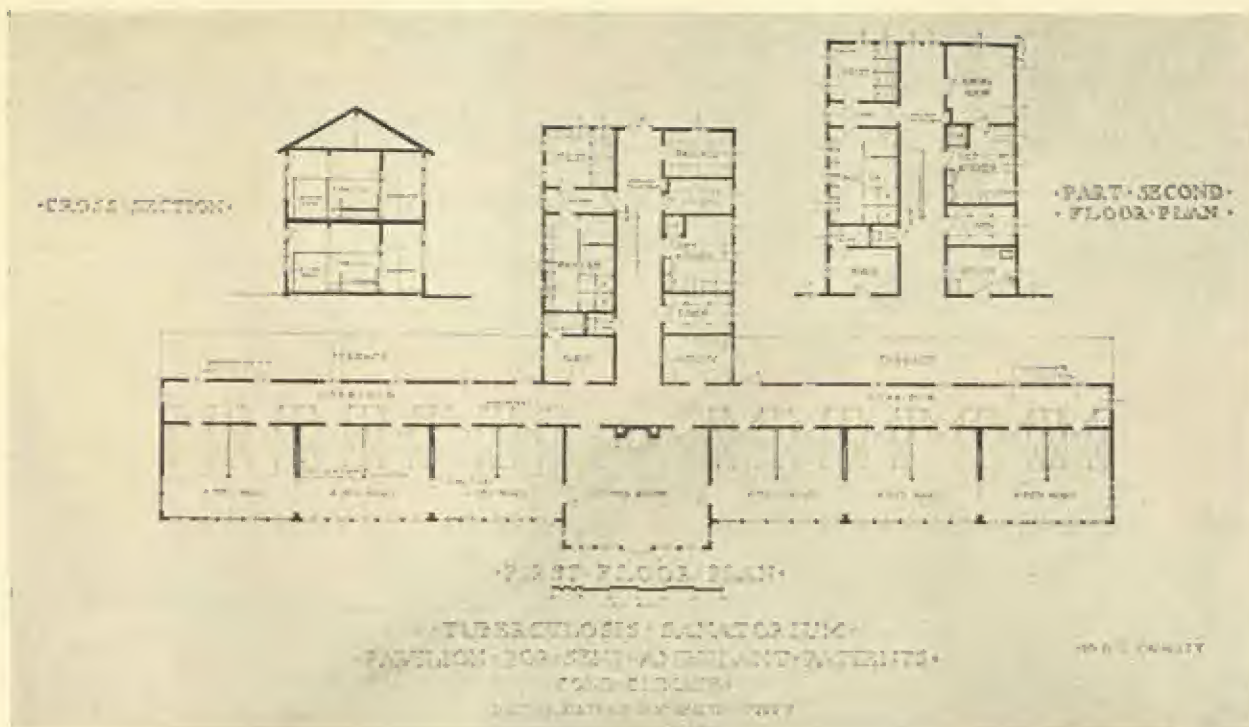


FIG. 5.—PAVILION FOR SEMI-AMBULANT PATIENTS (U.S. PUBLIC HEALTH SERVICE)

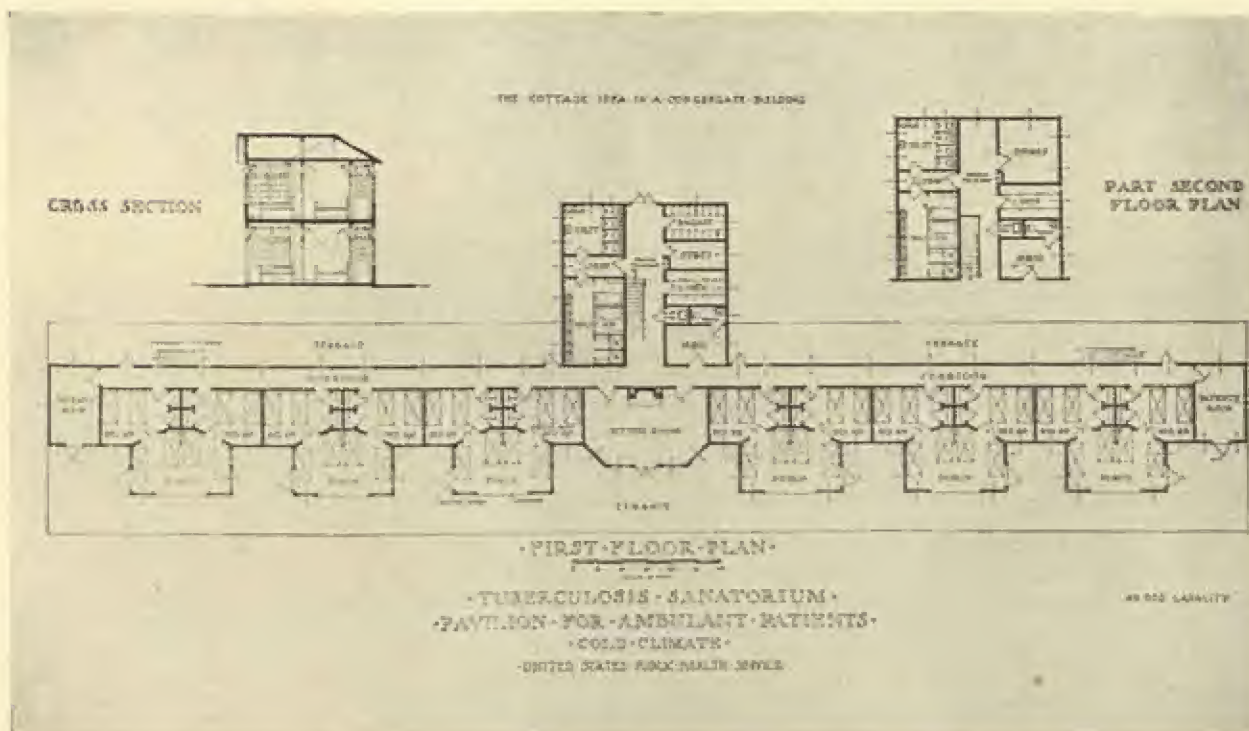
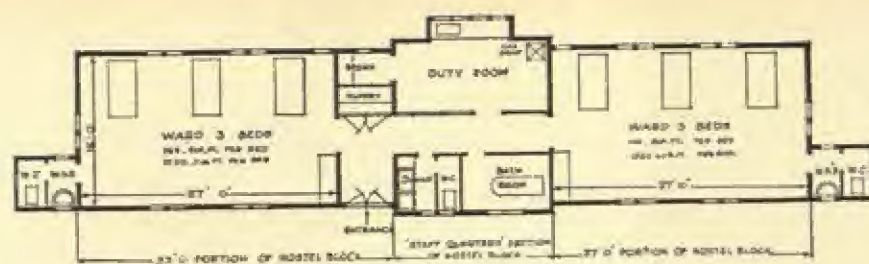
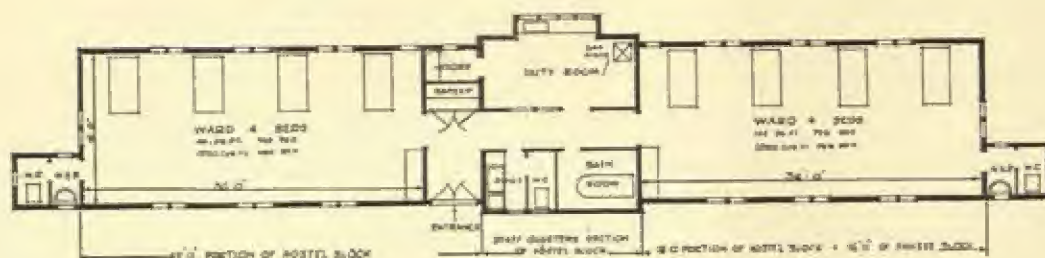


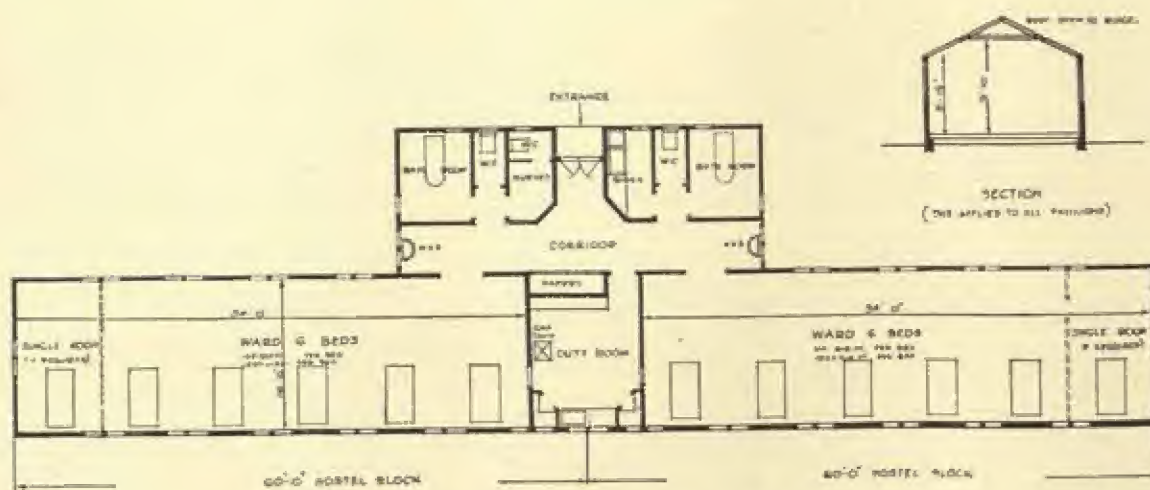
FIG. 6.—PAVILION FOR AMBULANT PATIENTS (U.S. PUBLIC HEALTH SERVICE)



OBSERVATION PAVILION (1 OFF).



ENTERIC OR DIPHTHERIA PAVILION (1 OFF).



SCARLET FEVER PAVILIONS (3 OFF).

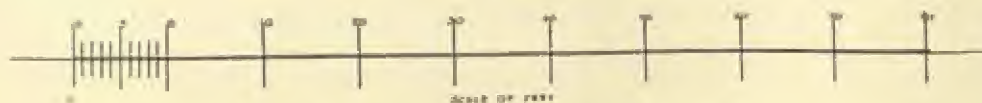


FIG. 7.—ISOLATION PAVILION, UDSTON HOSPITAL, HAMILTON

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1. WARD BLOCKS.

It is desirable that these should be of one storey. Blocks are usually provided for the three main infections—scarlet fever, diphtheria, and enteric—though measles, pneumonia and other infections are treated when accommodation is available.

Ward blocks should contain at least two wards—one for either sex, with the necessary sanitary annexe attached to each ward. A single ward should not have more than twenty beds.

In the central portion of the block should be placed the nurses' duty-room, milk larder, linen press, coal press, room for patients' clothes and boxes, also two wards for cases which for any reason it is desirable to isolate from others (one of these may be also fitted as a room for minor operations), with bath and w.c. in an annexe adjoining.

(a) *Wards*.—In the past the Local Government Board stipulated that each bed must have at least 12 lineal feet of wall space—144 square feet of floor space and 2,000 cubic feet of air space. (Fig. 7.) This regulation is not now strictly enforced, and if the superficial area is given, a reasonable height of ceiling is allowed, say 10 feet to 10 feet 6 inches. The width of wards will be according to the above size, 24 feet, with windows so arranged that the beds can be placed between them.

A wash-hand basin for the doctor and nurse should be provided in the wards. A medicine press may be placed in the ward.

Wards should be planned with a view to future extensions when found necessary.

Within recent years pavilions of single or two-bed wards have been constructed on the compartment or cubicle system for the separate isolation of mixed or doubtful cases of infectious disease. (Fig. 8.) These are very useful when only one or two cases of a single infection require isolation at a hospital.

The isolation wards should be the full width of the building, so that efficient cross ventilation can be obtained. The partition between the wards should be glazed above the dado level. It is not necessary to make the ceilings in these wards more than 10 feet.

The plans of the blocks at Walthamstow and the S.W. Hospital, London, are deficient in that these either have the wards placed back to back or have a central passage from which these are entered. The Pasteur Hospital in Paris has the same defect.

A day-room attached to each pavilion for convalescents should be provided.

(b) *Sanitary Annexes* should contain an apartment with bath and basin, a w.c. apartment and a sink-room with slop sink, steep sink for soiled or infected linen and a bedpan airing chamber. A bath and w.c. are sufficient for twelve to sixteen beds.

The position of the sanitary annexe in relation to the ward or wards has for a number of years been the subject of much discussion. Those which project from the side of a large ward are admittedly a nuisance, as they are obstructive of sunlight. The best position seems to be at the entrance to the large ward where the annexe is also convenient to the small wards. It may be entered both from the end of the large ward and the corridor through a small passage lighted from the outside. The small wards will be beyond, with the sanitary annexe between these and the large ward. The arrangement whereby the patient or nurse requires to leave the large ward and enter the main corridor in order to obtain access to the sanitary annexe is not a satisfactory one. With the improved fittings and plumbing of modern work the reason for the provision of the old ventilated "cut-off" passage has gone.

(c) *The Nurses' Duty-room or Kitchen* should be placed between the wards. In it should be placed a small range or gas cooker for warming milk, etc., a sink, a dresser and a milk press ventilated from the outside.

(d) *A Nurses' Lavatory and W.C.* should be provided in conjunction with the lavatory for female patients.

(e) A discharge bathroom with dressing-room adjoining have been provided in several hospitals, but they are seldom used.

Verandahs may be placed along the south wall of ward blocks, but if these are to be roofed in glass, care should be taken that proper ventilation is provided where the roof abuts on the ward wall. If this is not done, the wards tend to become stuffy. An apartment for storing patients' clothes and boxes should also be provided in the ward block.

2. ADMINISTRATIVE BLOCK.

This block should be placed in a central position to serve the various ward blocks.

It should contain a doctor's room with small laboratory adjoining, a matron's sitting-room, bedroom and bathroom, a nurses' dining-room and, where the hospital is a large one, a nurses' recreation room, bedrooms for nurses and servants, a kitchen with general scullery, vegetable scullery, stores, larders for meat, milk, vegetables and general provisions, servants' dining-room and, where the hospital is a large one, a maids' recreation room, nurses' and servants' lavatories, bathrooms and w.c.'s, large linen-room and stores for beds, bedding, etc., coal cellar, etc.

This block is usually built in two or three storeys.

The number of staff can be calculated on the basis of one nurse (day and night) for every four beds and one servant for every eight beds, though in very small hospitals the proportion of staff to beds is lower.

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3. OFFICES.

The offices consist of washing-house and laundry, disinfecting chamber, boiler-house and engine-room, coal-house and small workshop in one block.

The washing-house and laundry should have a receiving-room, a washing apartment, a drying-room, an ironing apartment, a dispatch-room, a small store and a lavatory.

The boiler-house, engine-room and coal-house are usually connected to this block, except in the larger hospitals.

A steam boiler is usually provided for (1) driving laundry and wash-house machinery, (2) general heating and domestic hot-water supply, and (3) cooking apparatus in kitchen. It is wise to provide an auxiliary boiler for emergencies.

The mortuary, with pathological laboratory and post-mortem room adjoining, small service room and viewing space, and motor ambulance shed are usually placed in a separate block, though these are sometimes attached to the laundry block.

The porter's lodge should have a room for visitors where they can interview nurses.

IV. DETAILS OF CONSTRUCTION AND GENERAL FINISH.

In sanatoria and hospitals the pavilions or the ward blocks may be of one storey and of light construction, though in certain cases two-storey blocks have been erected of brick or concrete blocks. Of course, where the cost of one-storey buildings in brick or concrete blocks is not much dearer than that of buildings of light construction, the more permanent type of walling may be adopted. The administrative buildings, especially where of more than one storey, should be built of brick or concrete blocks.

WALLS.—The following methods of walling are suggested for light construction :—

1. Wood framing cased with breeze concrete slabs 2 inches thick and finished on the outside with rough-cast.
2. Wood framing covered with expanded metal lath and roughcast.
3. Wood framing covered with felt and weather boarding.
4. Wood framing covered with felt and galvanised corrugated iron sheeting.

The inside of the walls of these semi-permanent buildings should not be lined with match-boarding, but covered with plaster or some form of patent plaster board.

ROOFS.—The roof covering may be of slate, asbestos tiles or, in the case of iron buildings, of galvanised corrugated iron sheeting. Roofs should be ceiled at the wall-head level, and not more than a foot above the

lintel of the windows, in order that efficient ventilation of the wards may be obtained.

FLOORS.—The floors of a ward should be strong, durable and resilient.

A well-laid floor in pitch-pine or maple in 3-inch widths, treated with beeswax and turpentine or patent preparations of a similar nature, is durable and easily cleaned. Thick linoleum laid on ordinary flooring and treated in the same manner as the wood floor is quite serviceable, and is in use all over this and foreign countries. When linoleum is used there is always the difficulty of obtaining a satisfactory finish to the thick edge. Two thicknesses of flooring can be used, so that the linoleum will finish flush with a wood margin round the walls. A rounded fillet can be placed over the junction and form the line for the position of the bed legs. Floors treated with a preparation should never be washed, but only mopped over with a damp cloth. Rubber floor covering is equally satisfactory, but has in the past been prohibitive in price for hospitals. It is now being produced at a comparatively moderate cost, and its use is worth consideration. The floors of corridors and sanitary annexes should be of cement properly treated to prevent dusting. A linoleum runner can be used on corridors with advantage. Some of the magnesite floors give fairly good results, but these are not to be relied on absolutely; they tend to retain grease and wear rough. Smooth vitreous tiles or terrazzo, laid in squares to avoid cracks showing, make an excellent floor for operating theatres.

WINDOWS.—The windows of a ward should have, as a rule, an area of 1 square foot for every 5 or 6 square feet of floor area. Various types of windows have been used—e.g., the double-hung sash window with hopper above the transome, the casement window with hopper over, and the centre-hung sash window with hopper in the lower part.

The double-hung sash window is suitable for the administrative buildings, and has also proved satisfactory for wards. A hinged draughtboard fixed to the sill should be provided. The austral window, an adaptation of the sash window, has been used in recent hospitals and found satisfactory. Wooden casement windows have often been used, but these are not satisfactory for exposed situations. Possibly the centre-hung sash window with hopper in the bottom part has proved as satisfactory as any type of window for efficient ventilation. The top of the window should be kept as near the ceiling as possible to give efficient ventilation. The ceilings may be coved towards the top of the windows. The sills should be kept about 2 feet 6 inches above the floor, to allow patients in bed a view of the surrounding country.

DOORS.—Ward doors should be 3 feet 6 inches wide, to allow the passage of a bed, and should be framed

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without mouldings. To obviate the slamming of doors by excessive draughts, it may be well to provide swing doors for all wards and corridors. French doors 4 feet wide opening to the verandah from wards are often, especially in sanatoria, made of the stable type in two halves. These doors should have a plain segmental galvanised iron weather sill bar screwed to the floor. When the door shrinks the sill bar can be heightened by means of packing. Beds can be wheeled over the sill bar without damaging it. The doors of lavatories and w.c.'s should be kept 4 inches above the floor, to allow these apartments being swilled out. All door furnishings should be of lacquered metal, to avoid the labour of polishing. Door handles may be of cocus wood.

VENTILATION.—In the majority of hospitals natural ventilation is usually relied on and is found quite satisfactory. In addition to windows, inlets at window-breasts, with radiators placed immediately in front to heat the air as it passes over them, are usually provided. The fresh-air inlets should be accessible for cleaning purposes. All tobis tubes and extract shafts are unnecessary and bad; they cannot be entirely accessible, and they get filled with dust. In certain sanatoria uncloseable ventilation openings have been provided in the wards to obtain a continuous blow through. These as a rule have proved unsatisfactory, and the openings are eventually filled with hinged sashes. In recent years many old theories of ventilation have been exploded, and it is now generally accepted that natural ventilation is the best and can be most easily obtained by using Nature's own ventilation—the wind.

HEATING.—Wards, as well as other apartments, can be heated on a low-pressure hot-water system, by means of radiators. There are scientific objections to this system of heating, which is by means of convection, but in a well-ventilated ward these do not amount to much. A fireplace, however, should also be provided at the end of each large ward for the purpose of cheerfulness, ventilation and affording radiant heat. Central stoves are not very satisfactory, as the upright flue pipe is unsightly and the descending flues are objectionable, as these are difficult to keep clean and often cause shrinkage of the flooring. The low-pressure hot-water system of heating should be worked from an independent boiler, or in a large hospital from calorifiers placed either in the power-house or in the pavilions, and fed with steam from the central boiler. In small hospitals it is more economical to have a small independent boiler in each block for heating purposes. Corridors and sanitary annexes should always be heated. Where possible radiators should rest on wall brackets, so that the floor space is kept clear underneath for cleaning purposes. Heating by means of steam on the high-pressure system should be avoided for several reasons :—

1. The pipes and radiators require to be protected to prevent patients from coming in contact with them; a severe burning can be inflicted by contact with them.

2. Heating by means of steam tends to dry the air to an unpleasant degree.

3. The mechanical difficulties of keeping pipes steam-tight and free of condensed steam are considerable.

Gas-heated radiators should always be avoided. From the nature of their construction it is impossible to carry off the fumes of combustion, with the result that the atmosphere is vitiated by poisonous burnt products.

It is advisable in all kinds of hospitals to instal boilers with an excess of power considerably above their catalogue efficiency, so that when a cold "snap" comes the temperature in the wards can be raised easily. An auxiliary boiler should also be provided in case of a breakdown.

In sanatoria, except in sick wards, a minimum of heating should be provided. Sanitary annexes in all classes of public health institutions should always be heated. In recent years some physicians have treated various infectious diseases in wards of a fairly low temperature with marked success.

DOMESTIC HOT-WATER SUPPLY.—There should always be an ample supply of hot water for baths and sinks. In small hospitals the best plan is to have a small independent boiler in each block for the supply of hot water. In large hospitals where there is a supply of steam from a central boiler, calorifiers fed with steam can be used for the supply of hot water. Domestic hot water should never be drawn from the heating system.

ARTIFICIAL LIGHTING.—Electric light or gas should be provided where possible. Electric light is preferable for well-known reasons, but since the adoption of incandescent burners the disadvantages of gas are at present not so great as formerly. Gas can now be regulated by switch as in electric lighting. Where there is no public service of gas or electricity at hand, it may be well to consider the advisability of providing an installation for electric light. In a small hospital this may not be feasible, and the usual means of lighting by lamps burning mineral oil will require to be adopted. The risk from fire is, however, increased by the use of lamps. In recent years lamps using vaporised oil with incandescent mantles have been introduced. The best known of this type is the petrolite lamp, which, it is stated, can be used with safety. Acetylene gas has sometimes been used, but it is not always satisfactory. Petrol gas, which consists of a mixture of the vapour of petroleum and air, and which is claimed to be safer and cheaper than acetylene gas, has been found satisfactory.

One advantage of petrol gas is that cooking stoves can be used in the service. Both these systems of lighting require, however, skilled attention, and in a remote district there may be some trouble in having repairs done expeditiously.

The general lighting in the wards should be by lights suspended from the ceiling with deep opaque shades, with the lamp entirely recessed, so that no direct light is thrown on the patient's face. To obtain diffused lighting a scheme of indirect lighting by means of lamps in inverted opaque shades illuminating the ceiling and the walls has been installed in various hospitals and found satisfactory. A plug placed at the head of each bed for a portable lamp should be provided.

BATHROOMS.—Except in very small ward blocks, it is advisable to have a bathroom for each ward.

Fixed iron porcelain-enamelled baths are to be preferred to movable metal baths, which always slop over when moved. For infectious diseases wards one bath will serve sixteen to twenty cases.

For tubercular wards, spray baths should be provided in addition to plunge baths for the ambulant cases. One bath will serve ten cases.

For departments where patients need assistance in taking their baths, these should be placed on a raised base to prevent the nurse stooping when bathing patients.

For children's wards where bathing is done by a nurse, smaller and shallower baths or slabs placed on high bases should be used.

For non-pulmonary bed cases among children, the ordinary bath is of little use when the children are in plaster frames. Some sort of washing slab, preferably of porcelain-enamelled iron instead of fireclay (as the latter is more difficult to heat), should be provided.

For admission bathrooms, a shallow bath or tub with spray should be used.

Supply pipes to basins and sinks should be kept clear of the walls.

WATER CLOSETS.—The water-carriage system of excrement disposal should always, if possible, be used.

In remote districts where a gravitation supply of water is not available for very small hospitals, earth closets must be used, but these are not satisfactory.

The position in the apartment of a w.c. should always allow of a straight flushing pipe from cistern being used if the combination type is not adopted. The seats of w.c.'s should be of the tip-up type.

SINK-ROOM.—This apartment contains:—

1. A slop sink suitable to receive slop water and the contents of bedpans.
2. A steeping tank or tub for the reception of soiled linen.

3. A press in outer wall for airing bedpans.

4. A press for keeping pails and brushes required in cleaning.

In regard to the slop sink, it should be placed sufficiently high to enable work to be done without stooping. The simpler the fitting the more effective it is. The use of fittings that are a complicated mass of valves, sprays, etc., should be avoided, as these require an expert to work and keep them clean. Sinks in duty-rooms where steam is available should have a steam pipe led to them for sterilising purposes.

LOCKER-ROOM, BOOTROOM AND DRYING-ROOM.—In sanatoria provision should be made for these rooms in ambulant pavilions.

The locker-room is often the lavatory or wash-up apartment. The lockers are placed round the walls and contain the toilet articles of the patients—*i.e.*, towels, mug, tooth brush, comb and hair brush. The door panels of the lockers are often formed of wire mesh.

In sick pavilions where it is usual to provide bedside lockers, these may be dispensed with in the case of children, and a wooden drawer fixed under the end of the bed frame.

The bootroom should be well ventilated, and have a wooden bench placed along one side on which boots can be brushed. The boots should be kept in this apartment.

The drying-room should be heated by means of a heater or rows of hot-water pipes. Wet clothes or bed wraps can be suspended from galvanised iron tubing fixed to the ceiling.

LAUNDRIES.—A hand-worked laundry will be found more economical than a laundry worked by machinery where the institution does not accommodate more than 25 beds. Once this number is increased, a steam laundry with machinery should be installed.

Except in very small institutions, the laundry block should consist of a receiving-room with bins, a wash-house and ironing-room in one apartment with drying-room placed in the centre, a small store for soap, soda, etc., a dispatch-room, and a lavatory for staff. The wash-ing-house will have washing machines, hydro-extractors, soap boiler, a few wash-tubs and steep tank for infected linen.

The ironing-room will have a calender and ironing tables, with an ironing stove where gas or electric irons are not used.

Drying chambers with movable horses are not, as a rule, used nowadays, as the chambers are difficult to keep clean. A drying chamber with rails suspended from the ceiling should be heated by means of hot-water pipes to a moderate temperature, and the saturated air drawn off by means of a ventilating fan.

It was common practice in the past to have a separate wash-house for staff linen, but this is quite unnecessary,

as separate days or a separate washer can be set aside for the staff linen.

In small institutions the mortuary, the ambulance shed, the coal store, etc., are usually attached to the laundry block.

For post-mortem purposes, a sink should be placed either in the mortuary or in a small apartment adjoining.

DISINFECTOR.—It is advisable even in a small institution to provide an apparatus for the disinfection of bedding, clothes, etc., that cannot be washed.

It is an economical arrangement to place the disinfecter in an apartment abutting on one of the walls of the wash-house, so that the disinfecter can discharge direct into the wash-house.

In large institutions where there is a steam boiler, a Washington Lyon, Manlove Alliott, or similar apparatus can be used.

Cheaper apparatus of the Velox or similar type of disinfecter is used sometimes in small institutions where no steam is available.

Sometimes a formalin spraying chamber is also provided.

TELEPHONES.—The ward blocks should be connected with the administrative blocks by telephone.

COLOUR DECORATION.—Too much care cannot be given to the general colour scheme for the walls and the finishings, not only of the wards, but all the apartments of an institution. Patients and staff, who possibly may be accustomed to taste in furniture and decoration in their own homes, should not be subjected to ugly and inartistic wards and rooms in hospitals.

The walls and woodwork can be treated in such a manner that a feeling of cheerfulness can be obtained without sacrificing restraint. As linoleum and cork carpet can now be obtained in so many different self tones, there is no necessity to abide by the original light-brown tone. Where cost will permit, tiling should be placed behind all plumbing fixtures and radiators to ensure cleanliness, and also to give a little colour. There is no detail too small to be given the fullest consideration by the architect if thereby the patients and the staff are made to feel comfortable and friction in administration is eliminated.

(To be continued.)

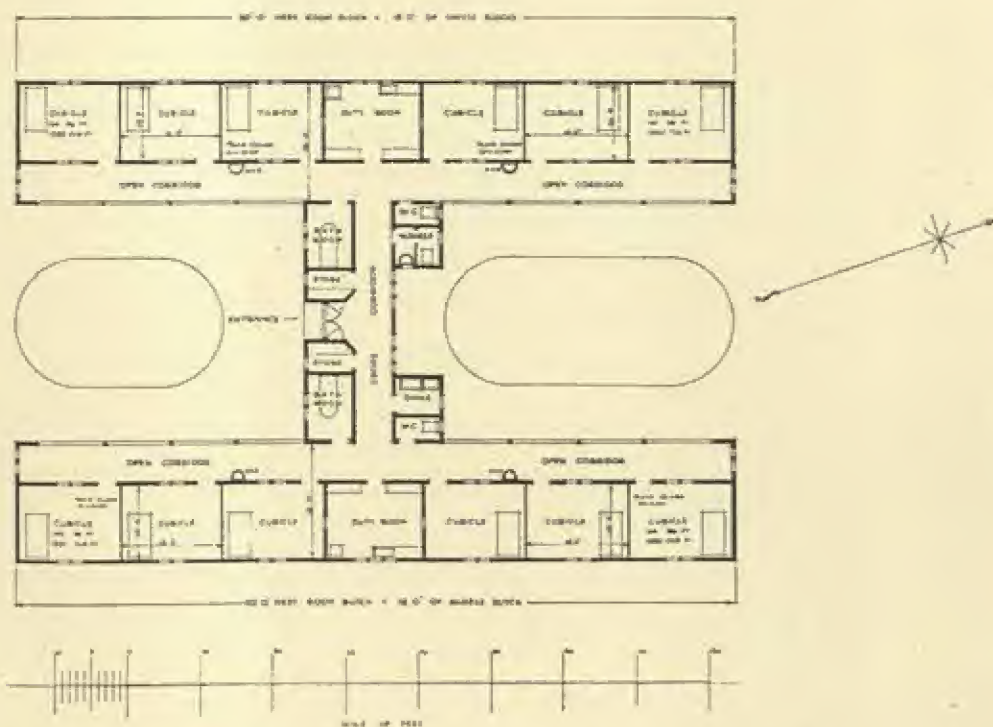


FIG. 8.—BURGH OF HAMILTON. UDSSTON HOSPITAL, PROPOSED EXTENSION, ISOLATION BLOCK.
ARCHITECTS: ALEX. CULLEN, LOCKHEAD AND BROWN

English Church Monuments*

A good book upon a most interesting and fascinating subject, and one, indeed, which will appeal to all students of mediæval architecture. The history of commemorative art is a reflection *in petto* of the decorative tendencies of contemporary building, and a vivid illustration of contemporary costume, armour, and heraldry.

Mr. Crossley has dealt with his charming subject not only in a charming manner, but with great industry and close observation, and, further, with obvious sympathy and enthusiasm.

In his modest Preface—not "Foreword," thank goodness!—the author offers to his readers "a volume which can be used as a starting point for the study of Monuments of the Middle Ages."

His book is a good deal more than that, and will give interest and pleasure by its erudition, its clear statement and chronological order, to folks of considerable initiation in that study; while its well-arranged series of illustrations, mostly photographic, admirably chosen and excellently reproduced, will be invaluable to students and delightful to mere amateurs, many of which latter class such a book is likely to convert into the former.

Mr. Crossley's general introduction should be carefully read for its condensed historical approach to his subject.

We cannot fully accept one or two of his initial statements, such as that "the great periods of art in the world's history are not more than three, the Greek, the Gothic, and the Italian Renaissance." Can we ignore the Egyptian, and is there nothing to be said for Rome or Byzantium, for China or for Persia?

Again, our author declares that "Mediæval Art, unlike that of the Greek period, was built upon faith."

Surely both, like all great art, were built on faith, that faith in their vital necessity without which no great work can be done; and, in the sense of religious faith, surely the Greek temples owed as much to zealously accepted creed, cult, and mystic ritual as the mediæval churches.

Mr. Crossley seems to us very sound in his view that up to the mid-fourteenth century, when the awful visitation of the Black Death shrivelled the arts and exterminated their adherents, the masons, at any rate in England, controlled them. And the earlier tombs and monuments of the period he selects show this very clearly. They are of stone and of thoroughly mason-like character.

In the earlier tombs bearing recumbent effigies there

is a closer assimilation to French fashions than in the later, yet almost always, even in the more elaborate examples, less grandiose in scale and detail, perhaps with more poetry, certainly with less "style." And this is natural enough; that inestimable boon to British arts, the Norman Conquest, was not so very far behind, and a large proportion of our skilled craftsmen were themselves from overseas or the sons or grandsons of Frenchmen. The language current in the court, the monasteries, the army, and to a great extent in law and commerce, was French, and the point of view, the manners and customs were also largely French.

The mason guilds of England closely assimilated to the close corporations of masons in France, of whom the more skilled and intelligent members frequently developed into carvers or "Tailleurs d'Ymaiges," and some of whom were employed in England, even far on in the fifteenth century.

There are in the church of Brede, in Sussex, a tomb with recumbent effigy, and a chapel door, as absolutely French as if they were in France, whose coast is, after all, almost within sight.

The author is right, I think, in attributing the separation of the craft of carving from that of masonry in England to the Black Death. That pestilence swept away an enormous number of the craftsmen. Villages were deserted, those great employers, the religious houses, depleted and weakened.

The towns offered shelter and well-paid employment for the skilled workmen who survived, and who naturally found opportunities of establishing their own workshops outside of confraternities.

Thus the image-makers' shops grew up, and image-making and decorative carving became a distinct craft, losing greatly in freshness and vigour, if gaining for a time in technical skill.

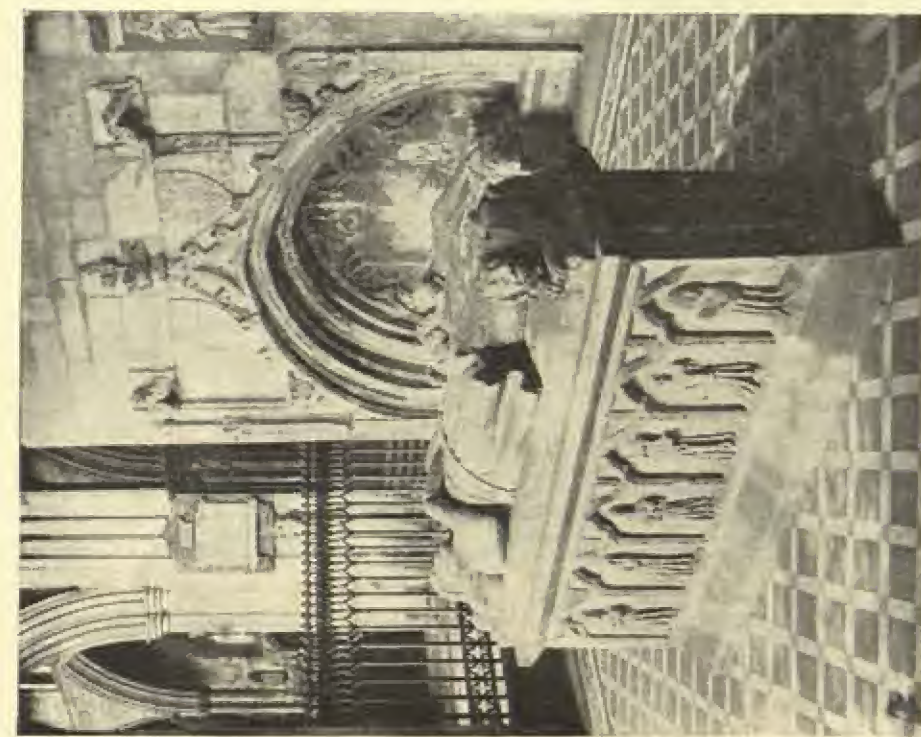
Mr. Crossley is nowhere more interesting than in dealing with the materials employed in English mediæval monumental work, and in their obvious effects upon treatment. The hard shelly limestone of Purbeck, capable of bearing polish and very generally called marble, the mountain limestones of the North, the oolites of the South-west, and the various sandstones of the southern Midlands, all influenced or produced types of design and workmanship; though for such relatively small objects as even the most elaborate of tombs the use of stone was by no means confined to the locality of its quarry.

Mediæval England being practically roadless, for heavy traffic, water transport had to be employed. This was easy enough for quarries on or near the coast, and of course helped greatly the use of Purbeck stone, while their positions upon tidal rivers near the sea and in stone-producing neighbourhoods easily account for the schools of masonry and the image-making workshops of such ports as Bristol and Gloucester.

* *English Church Monuments*, A.D. 1150-1550. By Fred. H. Crossley, F.S.A. 1921. [B. T. Batsford, Ltd.]



WINCHELSEA, SUSSEX
TOMB OF STEPHEN ALARD, ADMIRAL OF THE CINQUE PORTE, 1324



HOWDEN, E.R., YORKS
TOMB DECORATED WITH FIGURES OF MINSTRELS



ST. AUGUSTINE'S ABBEY, BRISTOL
CANOPY, 1320. TOMB TO ABBOT WALTER NEWBURY, 1478

Much stone came also overseas from Caen and other foreign ports, the little merchant ships delivering their cargoes of wool or other goods, and returning ballasted with building stone. Foreign stone may be found near the coast in the southern and eastern counties, and, on the banks of the Thames, competed with the Oxfordshire and Gloucestershire stones that came down stream.

England possessing fine alabaster in Staffordshire, Nottinghamshire, and Derbyshire, schools of carving and image-making shops naturally grew up near the quarries, and, as Mr. Crossley states, images, tombs, and reredos panels were distributed not only throughout England, but over the Continent, where they are still frequently to be seen.

The chapter upon colour-decoration is of especial interest and of value to the student. That effigies, tombs and their canopies were entirely decorated with applied colour and gilding is, of course, very well known, but, as I think, very imperfectly realised.

The chapters upon costume and armour and that upon brasses are excellent and instructive. The index and glossary are exemplary in clearness and accuracy, and the whole compilation makes a very admirable book, upon which author and publisher are both to be congratulated. They will perhaps excuse the suggestion that a future and cheaper edition should be produced, especially directed at craftsmen, with fewer general illustrations, but containing, say, a dozen large-scale photographs of the finer carving and other details.

EDWARD WARREN, F.S.A. [F.].

Review

SPECIFICATION, with which is incorporated the Municipal Engineers' Specification for Architects, Surveyors, Engineers, etc. Edited by Frederick Chatterton, F.R.I.B.A. [London Technical Journals, Ltd.]

The current annual issue of *Specification* (No. 24), under the able editorship of Mr. Frederick Chatterton, F.R.I.B.A., is a most interesting and valuable volume. As in previous editions, the trade sections have been revised and brought up to date by persons each with special knowledge of his particular branch of trade. The general principle of prefacing each section by copious data regarding materials, etc., amply illustrated and followed by typical specification clauses, has been adhered to, and, in many cases, considerably augmented.

One of the most useful portions of the book is the comprehensive index, divided into four sections—viz., "General," "Advertisers," "Analytical," and "Trade Names." The last is, perhaps, the most useful as, not infrequently, one remembers the trade name of a certain paint or chimney pot, but cannot, on the spur of the moment, recall the name of the firm supplying the article. The "Index to Trade Names," to a very

large extent, supplies this information. Doubtless, in future editions, this part of the index will be amplified and made more complete, independently of the fact that any particular firm does, or does not, advertise.

On looking through *Specification*, one is greatly impressed by the fact that, due to careful revision and additions, particulars of the latest methods of construction, materials, and proprietary articles are included. This is specially noticeable in the chapter—occupying about 15 pages—which deals with proprietary materials for rapid construction. Although the "Great War" is supposed to be over, the after-effects are still with us, and it is quite a question whether the innumerable "substitutes" for walls, roofs, floors, foundations, damp-proof courses, etc., will be employed to any great extent, except in the least costly (but by no means most economic) buildings.

The subjects dealt with in the special articles are all interesting and helpful. That by Mr. Sylvester Sullivan [A.], on "The Design and Construction of Shop Fronts," is illustrated by reproductions of photographs, both English and Continental. The various treatments shown for designing the windows in order to exhibit a large number of articles—or, perhaps, in the case where only one is to be displayed—are most useful.

The technical information is very concise in the article by Mr. J. P. Mendham on "The Construction of Farm Buildings," which is well illustrated by drawings, many of which have been lent for the purpose by the Board of Agriculture and Fisheries. In this subject the writer describes and illustrates a silo, which is used for the storage of fodder during the winter months.

Another article, by Mr. H. J. Birnstingl [A.], deals with "How to lay out a Housing Scheme," in which the author shows a hypothetical method of laying out an irregular area of about 73 acres, and gives very fully the various points which prompted him in making his design, such as the general principles, physical characteristics, roads, recreation spaces, etc. Plans, with short descriptions, are also shown of several examples of recent work by other architects.

Under the heading of "Roofing," by Mr. J. G. Cowell—who speaks with authority on the subject—a valuable addition has been made in regard to the matter of thatching. This delightful form of roofing for the country is being revived, and it may be interesting to know that, at the present time, in one of the English counties noted for its beautiful old thatching, many apprentices are being educated in the hitherto rather neglected craft.

The article by Mr. A. R. Powys [A.] on "The Repair of Ancient Buildings" is an excellent one, being very comprehensive, and including the R.I.B.A. "Hints to Workmen" and "Advice to Promoters of Restorations."

The short article by Mr. C. H. Dewey on "The In-

insurance of Buildings " deals with a matter on which an architect generally relies on the usual clauses in the contract to cover his client's liabilities. The writer, however, very clearly states the risks incurred by all persons concerned, and gives approximate figures for the rate per cent. of premium charges.

The main object of such a book as *Specification* is to condense in one volume a very large amount of information on the multitudinous subjects connected with building. This Mr. Chatterton has certainly achieved with great success.

R. STEPHEN AYLING [F.].

Correspondence

THE ROYAL INSTITUTE OF THE ARCHITECTS OF WESTERN AUSTRALIA
INCORPORATED.

Perth, 12 February 1922.

To the Editor, JOURNAL R.I.B.A.,—

DEAR SIR,—The Hon. Secretary is sending you the formal notice about the change of the name of this Institute, and also an intimation that the Architects' Act was passed by the Parliament of this State on 12 January.

Our Governor, Sir Francis Newdegate, K.C.M.G., is very much interested in our profession and has much architectural knowledge. At our annual open social meeting last July we admitted him an Honorary Fellow of this Institute: at the same meeting he read the cablegram stating that His Majesty the King had conferred the prefix of "Royal."

This Institute, in common with others in Australia, has for years past been striving to obtain an Act to register architects. The Institute of New South Wales was the first to succeed, and got their Act last November.

Eight years ago a Bill was drafted by this Institute, but did not reach Parliament, and, the war intervening, no further action could be taken until after the armistice. In 1919 a new Bill was drafted and the Premier, the Hon. J. Mitchell, promised to bring it before Parliament as a Government measure, which he did in 1920, it being introduced into the Assembly by the Attorney-General. However, it met with so much opposition in the Press and in the House that it never passed the second reading, but was numbered with the "slaughtered innocents" at the end of the session.

The Institute was, however, determined to get an Act, and in order to ensure its passing the Bill was revised, and a few clauses which were known to be repugnant to Members of Parliament were omitted, the principal omission being the clause prohibiting any other than registered architects "practising architec-

ture for reward." The Institute did me the honour to suspend the rule which limited my term as president to two years, and extended it for a third year, as I had been so closely in touch with the Bill in drafting and in its course in Parliament. I therefore with renewed vigour attacked the matter. On 9 September 1921 the new Bill was printed by authority of the Premier, Sir James Mitchell, K.C.M.G., and the Minister for Works, the Hon. W. J. George, C.M.G., introduced it in the Legislative Assembly. Again it met with much opposition from both sides of the House; we were at a great disadvantage having only one member in the House who was earnestly favourably disposed to it, Mr. W. G. Pickering, M.L.A., an architect who had championed it so vigorously the previous year. I had numerous interviews with members to induce them to pass the Bill, but various amendments had to be agreed to. It, however, passed through the Assembly and reached the Legislative Council, where it was introduced by the Hon. H. P. Colebatch, Colonial Secretary. Here opposition was met with from quite unexpected quarters, but it did not sustain any serious injury until every clause had been passed. Then a member threw a bomb into the arena by proposing an additional clause limiting the operation of the Act to the metropolitan area, and the House passed it. Fancy a man being an architect in London and not in Windsor! The absurdity of this amendment so violently perturbed some of our members that they wished to withdraw the Bill, but after consultation with Mr. Colebatch I determined to go on, and the Bill was sent back to the Assembly to approve the amendment, and just what I hoped for took place: the Assembly disagreed with the Council's preposterous amendment. By this time I was watching the clock, having been informed that Parliament would be prorogued in two days. I waited for seven hours in the gallery of the Council expecting the Bill to come up from the Assembly. At 1.15 a.m. I left the House to their all-night sitting. On 12 January I again went to the Council prepared for the worst, but to my great relief the members went back on their own amendment and threw out the limiting clause, and the Bill was passed just one hour before prorogation.

Nevertheless, judging from the hostility displayed by the Press and by many Members of Parliament, I feel assured that had the Bill not passed this session it would certainly never pass. The great cry was that such Bills are only in the interest of a favoured small section of the community who place themselves on a pedestal. The "practical" man was being displaced.

As you will see, the Bill very clearly gives builders and others besides architects the right to usurp architect's functions, but not his title; to restrict their predations is against public opinion. The professional man is not a *persona grata* in these days—certainly not in Australia.

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I consider that by getting statutory recognition of the profession we have gained all we can reasonably expect. It is for architects to prove they are entitled to more. At any rate, I shall end my three years' tenure of office with great satisfaction, and no man could occupy such an office under more happy circumstances and with so much cordial assistance and continued appreciation as the members of this Institute have evinced throughout my occupancy of the chair.—Yours very faithfully,

A. R. L. WRIGHT,
Licentiate R.I.B.A., President R.I.A.W.A.

ARCHITECTURAL EDUCATION AND OVER-CROWDING.

To the Editor, JOURNAL R.I.B.A.,—

SIR,—It was with pleasure that I read the letter by the President of the Architectural Association, with regard to the Entrance Examination held at their schools, published in your issue of 25th ult.

I think it will be found customary in most of the "Recognised Schools" to hold entrance examinations for students who cannot produce evidence of a sufficiently high general education. Provincial schools are at a disadvantage, in that they receive students for part-time or evening courses, who have been in architects' offices for several years, although quite unfitted for the profession as regards general education.

The tendency amongst practising architects, who are not members of the Institute, and not fully aware of the Institute's Examinations, is to engage lads between the ages of 14 and 16 years, who have not had the opportunity of a secondary education. After several years of office work these lads begin to attend the architectural schools and to consider the expediency of entering the examinations.

The question then arises as to whether the school authorities should close their doors to these students although they may show considerable promise in their profession.

Obviously had the architects, in the first place, refused to engage pupils until they had completed a course at a secondary school, the situation would never have arisen.

I think the matter is one which ought to be taken up by the Board of Architectural Education, and employers notified of their views.—I am, yours faithfully,

JOSEPH ADDISON [A].
*Head, Department of Architecture,
Leeds School of Art.*

CONDITIONS OF CONTRACT.

To the Editor, JOURNAL R.I.B.A.,—

DEAR SIR,—The Councils of the Royal Institute of British Architects, the Institute of Builders and the National Federation of Building Trades' Employers of

Great Britain and Ireland inform their members that until the National Standard Form of Conditions of Contract is agreed, the Conditions of Contract, dated October 1909, issued under the sanction of the Royal Institute of British Architects, in agreement with the Institute of Builders and the National Federation of Building Trades' Employers of Great Britain and Ireland, is temporarily the Form approved by these bodies, and that a joint letter be inserted in the respective journals of these bodies to that effect.—Yours faithfully,

IAN MACALISTER,
Secretary, Royal Institute of British Architects.
A. HUTCHINSON,
Secretary, Institute of Builders.
A. G. WHITE,
*Secretary, National Federation of Building
Trades' Employers.*

South Wales Institute of Architects

R.I.B.A. CONFERENCE IN CARDIFF, 8, 9 and
10 JUNE 1922.

PROGRAMME.

Thursday Evening, 8 June.

8.30 p.m.—Reception by the Lord Mayor of Cardiff (Councillor F. H. Turnbull) at the City Hall. An exhibition of prints and photographs of Cardiff, old and new, will be on view.

Friday Morning, 9 June.

10.30 a.m. to 11.30 a.m.—Paper by Major Harry P. Barnes, M.P., F.R.I.B.A., on "Unification and Registration."

11.45 a.m. to 1.0 p.m.—Visit to City Hall and Law Courts, Cathays Park.

Friday Afternoon.

2.30 p.m. to 5.0 p.m.—Visits to Welsh National Museum and Glamorgan County Hall.

Friday Evening.

7.0 p.m. for 7.30 p.m.—R.I.B.A. Banquet.

Saturday Morning, 10 June.

10.0 a.m. to 11.15 a.m.—Paper by H. T. Buckland, Esq., F.R.I.B.A., President of the Birmingham Architectural Association, on "Civic Architecture and Advisory Art Committees."

11.15 a.m. to 12.30 p.m.—Paper by Percy Thomas, Esq., O.B.E., F.R.I.B.A., President of the South Wales Institute of Architects, on "Problems of Practice."

Saturday Afternoon.

2.0 p.m. to 6.0 p.m.—Visit to Cardiff Castle and Grounds.

4.0 p.m.—Tea in the Castle Grounds, by kind invitation of the Marquis of Bute.

Saturday Night.

8.0 p.m.—Smoking Concert.

Sunday, 11 June.

Arrangements are in hand for a char-à-banc tour to Tintern Abbey and the Wye Valley for those members who stay in Cardiff over the week-end.

Unification and Registration

The Council have been informed that a good deal of misunderstanding exists, particularly among members in the provinces, as to the steps that have been taken in furtherance of the policy of Unification and Registration and as to the present situation. They have therefore directed that a short statement should be issued for the information of members.

It will be recalled that ever since the year 1905 the R.I.B.A. has been pledged to a policy of Statutory Registration, and various schemes have been prepared in order to enable a Registration Bill to be presented to Parliament with reasonable prospects of success. During this period the provincial societies generally have lost no opportunity of repeating their conviction of the urgent necessity for Statutory Registration, and their anxiety to assist in furthering the Registration policy.

At the end of the war the R.I.B.A. Council were again assured, through the resolutions of the provincial bodies and through the medium of the professional press, that the members of the R.I.B.A. and of the Allied Societies were as firmly convinced as ever of the necessity for Registration. At the same time the opinion was generally expressed that the unification of the profession was an urgent necessity in the interests of architects generally, and also as a means towards the attainment of Statutory Registration.

It is clear that by linking up all sections of the profession, and giving a central Council power to act on behalf of all, the action of the profession in public matters must be enormously strengthened. Not only is the question of Registration affected, but also all matters of architects' charges, conditions of competition, the relations between the profession and public bodies, action in legal cases, the regulation of professional practice, and the important matter of education. It is obvious that when legislation affecting the profession is dealt with in Parliament or when Government Departments seek the services of architects a united profession can exercise influence and pressure that would be impossible in the absence of unity of action. All the competent advice that has been given on the question of registration by Act of Parliament goes to show that united action is essential to success, and therefore the Council are convinced that Unification must be the first step.

The Council accordingly invited the whole profession to form a completely representative body for the purpose of drafting a scheme for the unification and registration of the profession. This step was hailed with unanimous approval, and the committee was formed. It contained representatives of all classes of the Royal Institute and delegates appointed by the council of every architectural organisation of any importance in

the Empire. The Society of Architects, the Architectural Association, the Official Architects' Association, the twenty Allied Societies in the United Kingdom, the ten Allied Societies in the Dominions, the Assistants' Union, and the Ulster Society of Architects all took part in the formation of the committee, and a general meeting of unattached architects also elected representatives. The resulting body of 66 members was the most completely representative body of architects of the Empire that had ever come together.

The committee began its work in July 1920, and after considerable discussion it issued an interim report on 12 May 1921 for the consideration of the Councils of the R.I.B.A. and of the Society of Architects. This report, which had the almost unanimous support of the whole committee, was, in effect, a recommendation that unification of the profession should be effected by the inclusion of qualified architects in the R.I.B.A. rather than by the formation of a new and independent outside body to govern the profession.

The committee requested the Council of the R.I.B.A. and of the Society of Architects to enter into negotiations and to find out whether, as a first step, a basis could be found for the absorption of the Society into the membership of the R.I.B.A. *This is the stage which has now been reached.* Committees representing the R.I.B.A. and the Society have discussed a provisional scheme; a committee representing the Associates is now discussing this scheme in detail with a view to its approval or amendment by the Associates. The Licentiates' Association has been considering how the interests of the Licentiate class would be affected.

No binding decisions of any kind have yet been made. Alternative suggestions are being carefully weighed by the various committees, and exhaustive discussion and the consultation of many interests will be necessary before any definite conclusion can be arrived at. It will only be at the termination of these discussions that the general body of the R.I.B.A. will be asked to consider the Council's ultimate conclusions and to give a definite verdict upon them. Before they are asked for that verdict the fullest and most detailed information will be supplied to them, and ample notice will be given of the meeting or meetings at which the subject will be discussed. As the matter is one deeply affecting the interests of members, it would not be fair that the decision upon it should be made at a meeting in London which could only be attended by a very small proportion of the provincial members who form the great majority of the R.I.B.A., and it is the Council's intention to take a postal vote on the subject, so that every member of the Institute will have an opportunity of expressing his opinion.

In the meantime the Council desire to make a special appeal to members to suspend judgment until a scheme has been prepared for their consideration by their own

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representative committee, and to ignore the premature agitation which has been set on foot by a certain number of members who are attacking proposals that have not yet been worked out by the responsible committees or placed before the members.

It is not by the vote of some 6 per cent. of the corporate members at a specially requisitioned meeting in London that this great and complex question can be settled, but by the considered opinion and the deliberate vote of the whole body of members when a scheme is finally placed before them.

It appears to have been rather generally but groundlessly assumed by the opponents of Unification that it implies :—

(a) The advancement to the full privileges of the R.I.B.A. of all the outside architects of whatever qualifications, and

(b) The loss by the Associates of all the prestige attaching to them as possessors of the hall-mark of examination.

The scheme of Unification, when issued, will show how these two points, which are of the greatest importance, are intended to be dealt with.

IAN MACALISTER,
*Secretary, The Royal Institute of
British Architects.*

18 March 1922.

NATIONAL HOUSING AND SIR CHARLES T. RUTHEN.

The following letters have been exchanged between Sir Charles T. Ruthen and the Institute :—

Ministry of Health, Whitehall.

16 March 1922.

DEAR MR. PRESIDENT,—Referring to the resolutions passed by the Council of the Royal Institute of British Architects dealing with my address to the Society of Architects, you may have seen in the Press my reply to a letter from the Secretary of the National Housing and Town Planning Council, in which I pointed out that some parts of my address had been entirely misunderstood, and explained the extent to which I intended my criticism of the part taken by architects in the Government Housing Scheme to apply. You will believe that it was with great regret that I found my words interpreted as throwing upon the architectural profession a general degree of responsibility, and subjecting them to an extent of criticism never intended by me.

The criticism which I had intended to make was naturally not made without cause ; there are unfortunately clear evidences that the Government did not receive in certain cases the help which they were entitled to expect from some of the architects engaged on housing schemes, and much time was occupied by the official staffs in eliminating needless and extravagant provisions.

I am very willing to meet the Council of the Royal Institute of British Architects if that is their wish. I could do

so if invited on 20 March or at the following meeting ; but in view of the explanation which has already been published, and my reiterated desire that architects may continue to be associated with Housing work, perhaps you may feel, as I do, that no good purpose will be served by embarking on a discussion of the extent to which certain architects proved to be inexperienced in a special class of work, and thus added a quota to the already inflated cost which had to be contended with. In any case I need scarcely assure you, as Director General of Housing, of my recognition that in many cases architects loyally assisted the Government in their struggle for economy, and of my entire goodwill towards the members of the Institute and the architectural profession generally.—Yours faithfully,

CHARLES T. RUTHEN.

Paul Waterhouse, Esq.,
P.R.I.B.A.

22 March 1922.

DEAR SIR,—The letter which you addressed to the President R.I.B.A., under date 16 March 1922, was laid before the Council on the 20th instant, and by resolution then passed I was directed to say in reply :—

1. That in thanking you for your assurance that parts of your address had been misunderstood, the Council specially welcomes your explanation that you had no intention of " throwing upon the architectural profession a general degree of responsibility."

2. That they receive with satisfaction your recognition of loyal assistance rendered by many members of the profession in the national struggle for economy.

3. That while naturally pledged to continue to deal, as in the past, with all questions requiring disciplinary action within the ranks of their own members, they concur in considering that a further discussion on the lines to which you refer is unnecessary.—Faithfully yours,

IAN MACALISTER,
Secretary.

Sir Charles Ruthen, O.B.E.

THE ROYAL GOLD MEDAL FOR ARCHITECTURE.

At a General Meeting of the Royal Institute of British Architects, on 6 March, Mr. Thomas Hastings, of New York, was elected by the members, and his name will be submitted to His Majesty the King as a fit recipient of the Royal Gold Medal for Architecture for the year 1922.

In the event of His Majesty graciously signifying his approval of the award, the Medal will be presented to Mr. Hastings at a formal meeting on 26 June.

Since the institution of this medal by Queen Victoria in 1848, it has only been conferred on American Architects on two previous occasions. In 1893 it was awarded to Richard Morris Hunt, and in 1903 to Charles Follen McKim.

Higher Buildings for London

At a General Business Meeting which was held on 20 February the President (Mr. Paul Waterhouse) in the chair, the question of Higher Buildings for London was discussed on motions submitted by Mr. Maurice E. Webb and Mr. Delissa Joseph.

The PRESIDENT: I will call upon the Secretary to read the notices of motion which have been received under the provisions of Bye-law 61.

The SECRETARY: The following motion has been received: "That this General Meeting of the Royal Institute of British Architects approves the action taken by the Council in connection with the Report of the London Building Acts Committee." To be moved by Mr. Maurice Webb, and seconded by Mr. Raymond Unwin.

The following further motion has also been received: "That this meeting approves the general principle of allowing buildings to be erected in certain positions of a greater height than is the present practice, subject to proper safeguards as to construction, fire escape, and fire attack." To be moved by Mr. Delissa Joseph, and seconded by Mr. Austen Hall.

Mr. DELISSA JOSEPH [F.]: May I rise to a point of order? This meeting was announced to be held for the purpose of a discussion on higher buildings for London, the idea being, as I gather, that the general body of members should have an opportunity of a free discussion upon this topic. If you accept the resolution which stands in my name, that will be so. But by accepting the other resolution you will be limiting the discussion to the question of the conduct of the Council in the matter, and a vote upon that resolution will be in the nature of either a vote of confidence in the Council or a vote of censure on the Council; and that will, necessarily, restrict the area and scope of the discussion. I submit it is not in order in relation to the terms under which the meeting has been called.

The PRESIDENT: I understand you to ask for my ruling as to whether the notice which appears under the names of Mr. Webb and Mr. Unwin is in order or is not?

Mr. JOSEPH: That is the point I presented to you, sir.

The PRESIDENT: It occurs to me, in view of the relationship which one of the motions bears to the other, that the best way of dealing with the second resolution would be to treat it as an amendment, if the movers so think.

After further discussion on the point the PRESIDENT said: I have two motions before me, and unless I receive a suggestion from the mover that he wishes to withdraw it, I can see no reason why they should not both be taken one after the other.

Mr. MAURICE WEBB [F.], in moving the resolution, said: I am rather sorry that time has been wasted on this interesting discussion as to procedure on the resolution and the amendment. As far as I am concerned as the mover of this resolution, I do not mind what form is chosen. I am speaking principally as a dweller in the City of London, but also as a member of the Art Committee of the Council who have given many hours of serious consideration to this Report of Mr. Joseph's Committee, and I must trouble you with a short history of what has happened, for the benefit of those who may not have read the whole of the particulars in the JOURNAL.

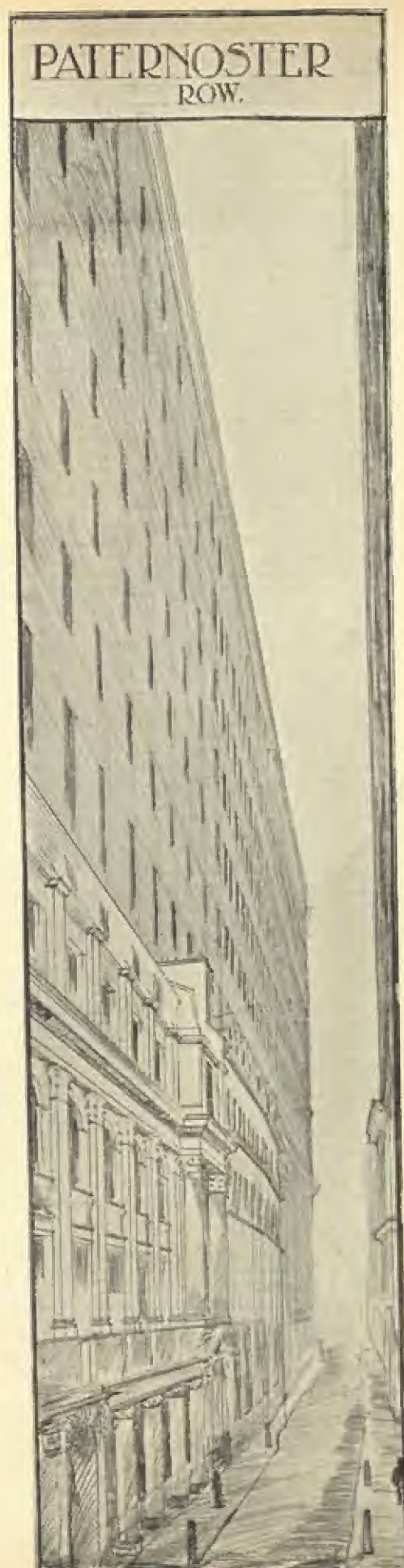
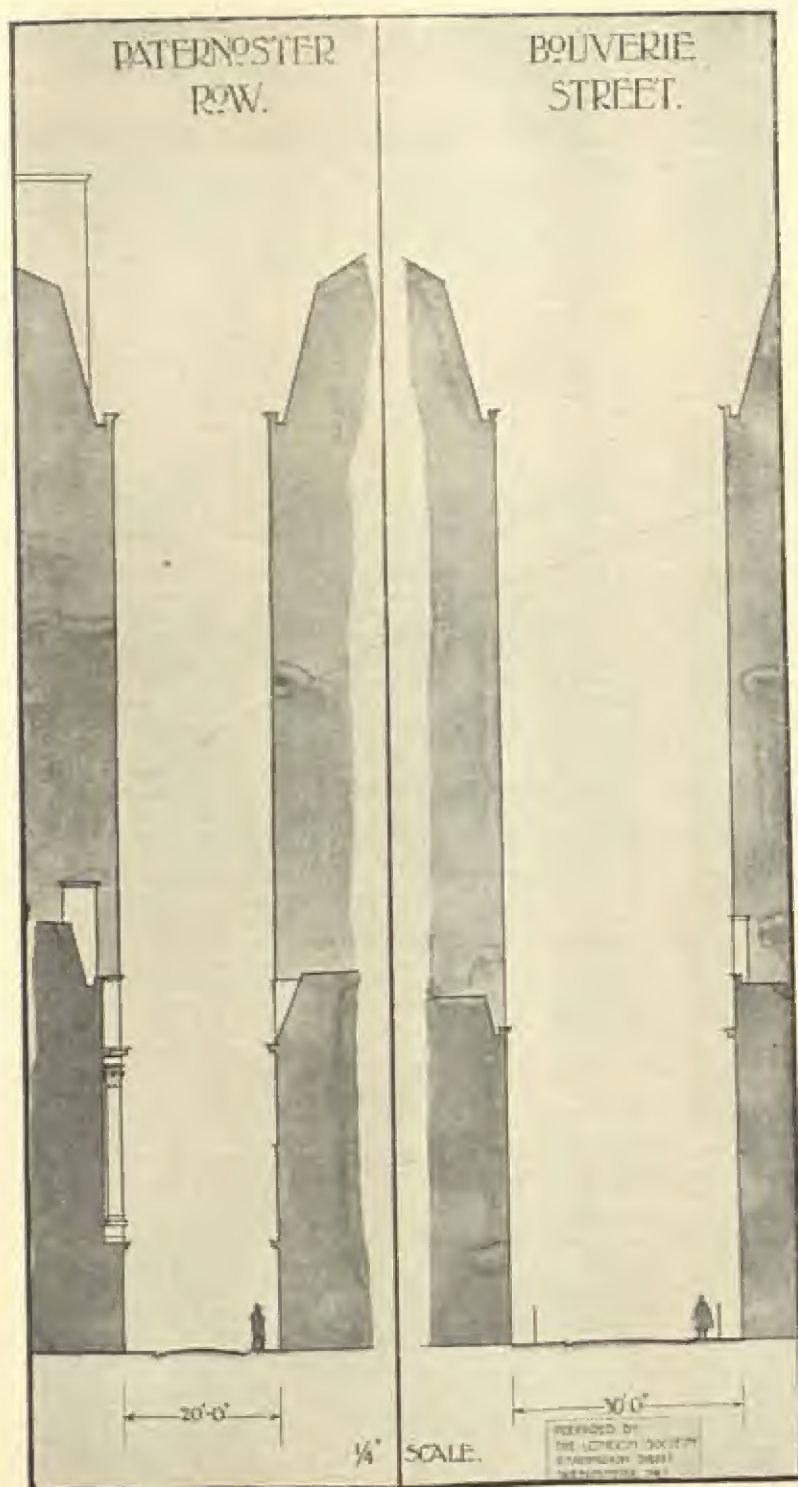
As everyone knows, architects have been a little dissatisfied with the London Building Act; they feel that there are many points in it which require alteration; and after the Papers read by Mr. Austen Hall and by Mr. Joseph about two years ago at this Institute, a committee was formed by the Council with the express object of going into the whole question of the London Building Act, and advising the Council if any alterations were required. In November 1921, eighteen months afterwards, this

Committee submitted an interim report to the Council dealing with two subjects in the Building Act only, and—I think very properly—they picked out the two most important ones. It is a pity the Committee took so long to report. They picked out the question of a general increase in the height of buildings for London, and the question of cubical contents for large buildings. They submitted, with the Majority Report, a Minority Report, the Minority Report signed by Mr. Keen. I am not quite clear as to who supported the Majority Report, or who would have supported the Minority Report if there had been time to get other signatures to it; but as the Council got it Mr. Keen was the only person who signed the Minority Report.

This Minority Report traversed nearly all the points in the Majority Report. The Council, having received that Report, did the only thing they could possibly do: they referred it to the Committees of the Institute which are set up for the purpose of advising them on such matters—the Town Planning Committee, the Art Committee, the Practice Committee, and the Science Committee. Three of these four committees reported in favour of Mr. Keen's Minority Report, and the Council, again after considerable discussion, adopted the report of the Art Committee, which went into the subject in some detail. But at the same time the Council thought it was a subject of such importance that the general body of members should have an opportunity of discussing it, and that is why we are here to-night, and that is why I put forward this motion—that is why we are here to discuss, at Mr. Joseph's request, the conclusions come to in the Report of the Committee of which he was the honorary secretary. The effect of adopting the Art Committee's Report, broadly, was first of all to agree with Mr. Joseph's Committee on the question of buildings of large cubical contents; and I think it is gratifying to see that since the Council has adopted their proposals the London County Council have also adopted them and have made very considerable modifications in their requirements for buildings of large cubical contents. But on the other two main points raised by Mr. Joseph's Committee the effect of adopting the Art Committee's Report is to oppose their conclusions. First of all as to the City of London, this is what the Committee advised (I read from their Report): "That in the case of the City of London, buildings 120 feet high, exclusive of two storeys in the roof, should be permitted in any street, irrespective of its width, or of its date." That proposal was turned down by the Council, and by three of their four Committees. The other proposal, asking the County Council to grant their powers more freely for buildings up to 150 feet in height in the rest of London, was dealt with in the Art Committee's report: "That an occasional building higher than the rest of the street may be an advantage in breaking the sky-line and so relieving the monotony of a long stretch of buildings of equal height. As Mr. Keen points out in the Minority Report, the L.C.C. have power to allow this—a power which the Committee feels should be exercised very carefully, and only in the case of buildings which, from their nature or site, should be of a dominating character. Whether the L.C.C. acting alone is the proper authority to exercise this power is another matter which may be worth the attention of the R.I.B.A. The Committee consider that some system of zoning or marking of such special sites on a carefully thought out plan, having due regard to the neighbourhood, surrounding buildings, width of street, and other public amenities, is essential before any fuller use is made of the L.C.C.'s powers, if the scale and character of London architecture is not to be destroyed." I am prepared to stand by that sentence.

That, I think, is a fair history of what happened within this Institute. I do not propose to touch on the newspaper controversy which has been carried on outside.

In considering the Council's attitude in this matter I think we must remember that we exist to further the cause of architecture, and incidentally the public amenities of the cities in which we live, in this particular case London. In matters affecting London we must hold the judge's scales



between the various sections of the community, and I submit that in this instance the Council of the Institute has done so. Three out of their four Committees have voted against these proposals for higher buildings irrespective of the size and width of the street. The London Society reported against them, also the London County Council after consultation with their Fire Brigade Committee; the Metropolitan Branch of the Medical Officers' Association reported in favour, subject to many questions of health and sanitation, and only on the assumption that underground rooms would not be used for working in in future, an assumption which has no foundation in fact. I have not visited America, but I understand that there in their high buildings they have enormous basements going down in some instances 50 or 60 feet, in which people work and more or less live the greater part of the day. Only to-day I have received a report of the Town-Planning Institute. They have gone into the whole subject—and they are a very responsible body—and they have voted against the general idea of allowing an increase in the height of buildings. The only people whom the Building Acts Committee received unqualified encouragement from were the Association of Retail Distributors, who supported the scheme. In all London, after eighteen months' deliberation, they could only find one organised body of men to support their proposals, and that is a body of business men who are, naturally and very properly, looking after their own interests. The Committee's Report, which the Council rejected, contained in it from beginning to end, as far as I could see, no thought of any interest but that of commerce, and the immediate needs of the great stores and other public buildings; there is no suggestion that anybody or anything else is worth considering, except with regard to precautions against fire and the elementary needs of sanitation. The word "Architecture" is not mentioned in that report from the first word to the last. Our Council does not exist to support one particular branch of the community: we are bound to consider the good of the whole. If we did not, our work would not carry any weight with the public. If the capacity of the City is increased by 50 per cent. the whole of the supply services will be hopelessly overloaded; they are bound to be. There will be a 50 per cent. increase in the work which will have to be done by the drains, by the mains, the tubes, the buses, the trams, and all for the benefit of a few people who own or wish to erect large buildings. That is one of the great troubles they have in America, and that is why they are now adopting very drastic laws limiting the height of buildings for the future. None of those points was brought out in the Report. It has been said by the supporters of these proposals for high buildings that those who oppose them have used unfairly the argument of the American "sky-scraper." Sir Henry Tanner and Mr. Joseph have both published diagrams in the last few weeks showing sky-scrappers in comparison with their proposals, and I suppose they have done so to try to persuade us and the British public how innocuous their proposals are, because the proposed buildings look small and low beside the American sky-scraper. So to-night, as we have been accused of unfairness in this respect, I am showing two or three diagrams, which are on the wall, and which omit any reference to sky-scrappers. [See p. 311.] Those are two ordinary London streets in the City—Paternoster Row, which is 20 feet wide, and Bouverie Street, 30 feet wide. If 120-foot buildings are to be put there, that is what you will get. The diagram speaks for itself. It is a sketch made from a photograph. The lower half is the height of the buildings to-day; the upper portion shows the height if they are built as proposed. I have taken two average streets; they are not the largest nor the narrowest. I cannot help feeling that anyone who thinks at all is bound to support the Council in their action in throwing out this report as an insufficiently considered one. In it nothing has been taken note of except business interests; and if you throw out this resolution, you will be doing a great disservice to the Institute. The public at present regard the Institute as their

adviser on these matters, and anyone can see that to live in streets like that cannot be good for health or for business or for the community in any way. Therefore I ask you to support this resolution: "That this general meeting of the Royal Institute of British Architects approves the action taken by the Council in connection with the report of the London Building Acts Committee."

Mr. RAYMOND UNWIN (F.): Mr. President and gentlemen, it gives me very great pleasure to have this opportunity of seconding the resolution, and to support the Council, and to congratulate them on the public spirit which they have shown in the advice which they have given to the public in this matter. As the mover has already mentioned, the Town Planning Institute has considered this matter in great detail, and I would like to recall to you some of the points which weighed with them.

They considered that it was of the utmost importance that the relative conditions of atmosphere, climate and latitude of this country and the American towns with which it is often compared should be taken into account. The latitude of New York is not that of London; it is nearer the latitude of Rome or of Constantinople. In the winter the sun rises 15 degrees above the horizon; for half the year it does not rise more than 45 degrees above the horizon, while in midsummer it does not rise more than 60 degrees above the horizon. It is quoted by the defenders of this proposal that the rear of the buildings is amply safeguarded by the angle of 63 degrees—I think that is the figure—yet the sun never rises more than 60 degrees above the horizon.

The next point I would draw your attention to is the great difference in the provision in American cities for dealing with the enormous volume of traffic which high buildings cause in the streets. In New York you have ten or eleven main streets, each 100 feet wide, in a longitudinal direction, and you have cross streets at frequent intervals from end to end. Yet those streets are congested, almost impassable, at certain hours of the day. It is absolutely certain that any increase in the height of buildings in London must increase the congestion of traffic, it must put an added strain upon the public services, the water supply, the drainage, the vehicular traffic, for both passengers and goods. Moreover, it must reduce the air space and light, and impede the circulation of air to a very considerable extent, and we have not too much of either light or air in London, considering the nature of our climate, and there is a much smaller amount and intensity of light than is enjoyed in New York. It has not been made clear what advantage we are going to gain from this proposal. I do not believe it has been put forward that any great public advantage is to be gained.

After a consideration of these various points the Town Planning Institute decided that it could not recommend that there should be any increase at present. It did, however, recommend that so soon as the form of future government of Greater London, now under consideration, has been determined, a development plan for the whole area of London should be prepared, and suitable zoning regulations, on the lines of those recently sanctioned for the City of New York, should be prepared and adapted to the special conditions of London, and that effect should be given to those regulations. It is impossible to grant any haphazard relaxations without the greatest danger; even in the few cases where some extra height might possibly not be injurious it could only be safely allowed on the basis of a careful plan for London, with the regulated use of height zones. The Town Planning Institute recommends that no relaxation be made. The Royal Commission on Housing in Scotland strongly urged legislation to forbid tenements more than three storeys high. The cost per room of high buildings is about double that of the cost in cottages, and that, of course, without lifts. It must be remembered that, once built, the cost of removing these high buildings would be prohibitive. After a thirty-four years' struggle in America they have secured that each window shall open on a space not less than 12 feet wide for four storeys high.

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The higher the building the smaller the open space which will be secured in practice, owing to the increased value of land which follows high buildings. Anyone who has been in America and has explored their tenement blocks must have seen many of the rooms in which there are no windows, or in which it is actually necessary to strike a light in order to find the window. There must be those who have stayed in their best hotels in rooms innocent of sufficient daylight to enable them to dress; who have had to traverse their congested streets, and tried to get into the Underground about five o'clock or move along the sidewalk at lunch-time, or, worst of all, have traversed a street under that dreadful apparatus known as "the Elevated." To anyone who knows the results of high building, whether in America or elsewhere, who knows how London is the envy of the whole world because of its genius in escaping high buildings, it is difficult to believe people could be so out of date as to want such a change as is now recommended.

This agitation is not confined to England. It prevailed in Germany about eighteen months ago. This is the kind of thing that was advocated for some of the big stores in Berlin, and I think it appeals to such philanthropists as Herr Stinnes and some of those great *Gesellschaften* which you find there. They are anxious, naturally, to have these big places; it is their point of view; they want to crowd all these businesses into one store.

We recently saw in these rooms a fine exhibition of American work, and I am glad to say I then had the opportunity of testifying to our admiration for the great work the Americans have done in architecture. But when English people and architects suggest that we should dress up London in the cast-off clothes of New York, I really think it is time to turn. Do not let us copy those things which they themselves have become thoroughly dissatisfied with, and are doing their best to restrain. It is not of London yet that Sir Martin Conway has to say that he would not, if he could help it, live lower down than the thirtieth storey. I do not know that Sir Martin Conway showed great enthusiasm for helping the people in London who might have to live twenty-nine storeys below him, while he enjoyed at that height the air and sun which so satisfied him. This is a case in which we are asked to sacrifice genuine public interests for the purpose of private interests. Let me read you a quotation from our own JOURNAL: "Although it may be reasonably maintained that a height of 80 feet is adequate in thoroughfares not more than 80 feet in width, it cannot be logically maintained that this is an adequate height in streets of greater width than 80 feet, or in positions where buildings face open spaces such as Hyde Park and the Green Park, big squares such as Lincoln's Inn Fields, or the riverside such as the Thames Embankment." [MR. JOSEPH: Where is that?] It is in the Royal Institute JOURNAL, I think in your own address, in March 1920. Is that what Lincoln's Inn Fields has come down to us for? Here we have in London a few open spaces left, which have missed the awful spread out of bricks and mortar, and are we actually going to let people who happen to own the frontages to Lincoln's Inn Fields build a high wall of 200 feet round it? I say it is preposterous to take advantage of these open breathing spaces for London, in the interests of a comparatively small number of people who want to crowd an exaggerated amount of business on to a limited space. I very much hope that this Institute will firmly support the Council in taking what I believe has been the thoroughly disinterested view in protecting London from having foisted upon it ideas which already are out of date in those countries which have tried them.

MR. ARTHUR KEEN [F.]: As I was the author of the Minority Report of the Building Act Committee I would like to say a word or two on the subject—that is, in support of Mr. Maurice Webb's motion. In the first place, may I say it was only from the accident of there not being time to get other signatures before the report was sent in that my signature alone appeared? If there had been more time, there would have been

more signatures. I know of two or three who would have signed, and probably there would have been as many as five.

I am told the public say that we architects object to higher buildings in London simply on artistic grounds, and that we are not mindful of or that we know nothing about the economic considerations involved. That is not at all true; we are very much concerned with the economic considerations, but I should be sorry if it could be truly said of this Institute that in considering such a question it did not lay full stress on the architectural considerations as well. By the terms of our first Charter we are concerned, as members of this Institute, with the domestic convenience of citizens and the public improvement and embellishment of towns and cities; and therefore it is perfectly clear that the beauty of the City of London is one of our first concerns. I think nobody will dispute that continuous lines of high buildings in any street must tend materially to destroy the beauty of this city. You have only to walk down Victoria Street, Westminster, for a proof of that. It is a wide street, it is lined on both sides with high buildings, generally speaking of a uniform height, and it is one of the most depressing streets in London, uninspiring and demoralising to a degree. The fact is that light is essential to beauty. You cannot have beauty without light, and these lines of high buildings shut out the light and destroy the beauty. The only possible ray of interest in the whole of Victoria Street, as far as I remember, is the church and churchyard about half-way down the street which afford some relief to it. London is an intensely interesting place from the point of view of the artist; it is haphazard and picturesque, and full of variety; but it is an extremely beautiful city. I suppose that London depends more than anything else for its particular beauty and character on the sky-line, and the fact that it is so readily seen. The sky-line is being rapidly built out. Take Regent Street: the whole character of Regent Street is being changed for the worse. Let it be understood that I say nothing about the architectural character of the buildings. I am speaking only of the height and the continuity of height. King William Street in the City was a most interesting street—it had well-designed, well-composed buildings, but it has been almost completely transformed. Tall buildings, some of them extremely good architecturally, have been and are being erected on both sides of that street; the street is being spoilt. The same may be said of Moorgate Street. We have been told again and again that such a position as Gracechurch Street, where it looks down on London Bridge, is particularly suitable for high buildings. A high building has been erected facing London Bridge approach. I come over London Bridge every day, and I am familiar with the view which is presented as one walks across the bridge from south to north. It used to be one of the most interesting views in the City: St. Magnus Church on the right, with the green trees at the base of it, and the Monument and Fishmongers' Hall in the distance, with the sky showing over low buildings. Now a high building has been put up, shutting out the whole sky like a wall, and destroying the picture. I do not blame those who have erected that building; they are acting in their own best interests; but that is the kind of thing which is inevitable when people are allowed to put up high buildings, and it is the thing which will ultimately spoil the beauty of London, upon which I set very particular store. We know the building owner will take advantage of everything which the Building Act will give him, and there is no control over him apart from that exercised by the Act. He will take full advantage, even to the extent of putting up buildings 120 feet high throughout the City, if you will allow him.

In the matter of light it has been pointed out by Mr. Unwin that it is not fair to compare New York with London, because it is more in the latitude of Rome or Constantinople; I think, as a matter of fact, it is in the latitude of Naples, which is about 700 miles farther south than London. The conditions which prevail in New York are different from those that prevail in London, and they permit things there which would be intolerable here.

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As for the proposal for a 120 feet limit in the City, to my mind it hardly bears speaking about. There is a population of, I think, half a million in the City every day; and that the greater proportion of these people should be condemned to work by artificial light above the ground is terrible to contemplate. As to traffic, in London it has already reached such a point that we do not know how to deal with it. It makes my heart ache to go to the places where the trams and buses start from and see the struggle people have to get home. They have started early in the morning and have been working all day, with perhaps none too much to eat, and to see the struggle they have to get home again is intolerable already. If we double the accommodation for workers in the City, I do not know what will happen in the matter of traffic.

We have been told that, as people find it difficult to get home, it is desirable for them to be housed near London's centre, and we can solve the housing difficulty to some extent by means of buildings of a height of 150 feet. We already have in London working-class dwellings which are five storeys in height, and it has always been a matter of wonder to me how young children who live in these places, and how their mothers, especially expectant mothers, can climb up those five storeys every time they return from going out. I suppose there are many here who have young children of their own, and I do not know how they would contemplate the idea of their children going unattended to their homes in lifts to the top of buildings 150 feet high. I do not object necessarily to a high building if it is in its right place and if the conditions are suitable. One knows of plenty of cases in London where high buildings are perfectly right. Such a building, for example, as Whitehall Court—I do not know about the back of it, but the side which you see towards the river—is a fine object and fits into the general view. The Hotel Cecil is another instance, and that, again, comes into the general view and is not aggressive. Then there is the Prudential building in Holborn, where the central block forms a huge tower which constitutes an extremely fine item in the view down Holborn. Burlington House, in Piccadilly, is effective. High buildings can be erected properly under the existing regulations. It rests with the County Council. In my judgment, they have hitherto exercised their discretion in a reasonable way, and will, I trust, continue to do so. At any rate, I hope they will take into account the special circumstances of each case. And I hope that not the least of the things they will take into account in all these matters will be a consideration of the amenities of London from the point of view of the artist and the architect.

Professor ADSHEAD [*Vice-President*]: Mr. Keen has mentioned that his was the sole signature on the Minority Report, due to the fact that the time for sending it was very short, and he was not able to get other signatures. I was a member of that Committee, and I opposed in every way possible the excessive heights which were suggested in the report. It was only because I happened to be in Newcastle at the time that I was unable to sign it. I am a member of the Art Committee, and I have very much pleasure in further endorsing the report which was sent in by that Committee. I would like to refer to one or two matters of a very general and regional aspect, as one who has studied this question from its transport and town-planning points of view.

Mr. Unwin has dwelt on the conditions obtaining in New York, and the points for and against high buildings there. The references to New York have been thoroughly ventilated in the Press. I myself spent ten weeks not many years ago in New York and had an opportunity of making special investigations into the conditions pertaining to high buildings, and the conditions as to high domestic buildings, but I shall not dwell upon these now. What I propose doing is to say a word or two in support of a general principle—the all-world principle—that obtains to-day; and that is to extend cities rather than to contract them. This principle has got hold of America, and it is now becoming the

recognised principle of town development, that a city should extend laterally rather than vertically. Take the policy of the County Council. Who would suggest that a mistake had been made when they departed from the policy of erecting high buildings in congested areas, and took people out by the trams to more healthy and salubrious situations? I have been concerned in housing for the working classes on certain estates, and one of the principles laid down there was that no buildings for the working class should be more than three storeys in height, and for the very reasons which Mr. Keen suggested. I agree with Mr. Keen that it is ridiculous to consider the question of housing the working classes in buildings which will be so high that the homes will have to be reached by lifts.

Then take the importance of the transport question to-day, and the facilities which are afforded compared with those of ten or fifteen years ago. Consider the way in which our big offices are now occupying sites on the outskirts of the centre rather than in the centre. Take the South side of the Thames—Stamford Street. In the last ten years we have had great buildings like W. H. Smith and Son's printing works, crossing the river to sites where they can obtain more elbow-room. Take the Government offices, the County Council offices, which are now across the river; the Labour Offices at Kew, the Pensions Offices at Acton. This segregation of buildings is one of the most striking features in modern commercialism. Let me refer to a paragraph in Horace Cubitt's *Buildings of London*, dated 1911 in which the author says: "It must be remembered that the tendency has been towards a reduction in the height of London buildings. At the time of the passing of the Act 90 feet was allowed under the provision of the London Council 1890." And from that we get to 80 feet. Are we going back to 120 feet? Is London going to be the one reactionary town to reverse this world-policy of spreading laterally? I would remind you that at present the height to the under side of the cornice in London is only equalled by one city in Europe—Vienna. It may be interesting to some of you to know that the height to the cornice in Berlin is 72 feet, in Cologne 65 feet, in Dresden 72 feet, in Düsseldorf 65 feet, in Edinburgh 60 feet, in Hamburg 78 feet, in Munich 72 feet, Rome 78 feet, Stockholm 72 feet, Paris 65 feet, with two storeys in the roof. So we are not very badly off with 80 feet. And even then we have the County Council, who have it in their discretion to allow us to put up higher buildings in selected places suitable for their erection. I agree with Mr. Keen in what he said about the suitability of high buildings in such places as on the Thames front, provided you look after the backs. I also agree with the clause in the Art Committee's Report in which they admit there are certain sites in London where high buildings might suitably be erected. But I hope these sites will never be the subject of regulation or bye-law; but that when building on such sites is allowed it will be on spots indicated on a plan of London such as I hope will before long be made.

Mr. DELISSA JOSEPH: I presume, sir, that if I speak to the present motion it will not disqualify me from speaking later.

The PRESIDENT: No.

Mr. JOSEPH: Then I will make a few observations now. At the present moment the discussion is around the action of the Council. After the years that I have been a member of this Institute I should be very loath to vote against an act of the Council, even though I might disapprove of its action. That is why I feel that the freedom of discussion which might have been possible on the general terms of my motion is necessarily lessened upon the motion as it stands. But I will deal with a few of the points which have been discussed. I can soon dismiss the diagram which is on the wall by saying it is easy to discount a new thought by reducing it to absurdity. It has not been in the mind of anybody who has been discussing this matter seriously that we should build rows of houses 120 feet in height in streets which are only 20 feet wide. Nor was it contem-

plated that a diagram would be prepared which would omit to show the 80 feet height and two storeys in the roof to which we are entitled under the Act. The particular buildings in Pater-noster Row and Bouverie Street which have been shown by the London Society omit to show the height to which we may go under the present Act. Therefore the sketch gives a fictitious impression of the effect of buildings of the kind in a narrow street. Mr. Webb and Mr. Keen have been fair in the presentation of their views, and the other speakers have dealt with it from the special points of study to which they have devoted their lives. But it is scarcely fair to say we have not given sufficient consideration to the matter, seeing that it has taken us eighteen months to consider and report.

Although Mr. Webb dissociated himself from the tendency to associate our work with "sky-scrapers," his remarks were largely directed to the New York practice; and when we talk of that practice we have before our eyes and minds the New York sky-scrapers. There is little doubt that the adverse criticism which has been offered as to sky-scrapers is unanswerable. But we are not seeking to put up sky-scrapers. Sky-scrapers are buildings of anything from 500 to 750 feet high. The highest building recommended by our report is 150 feet; therefore the criticisms which have been brought against higher buildings for London by comparing them with the sky-scrapers of New York do not appear just.

Recognise, by the enthusiasm with which the remarks of previous speakers were received, that I am addressing a meeting whose mind is already largely made up, but I have a great belief in the justice and fairness of my brother architects, and I feel that before they come to a decision on this matter they will weigh up all the considerations involved. This is not a movement in which anyone has an axe to grind. The origin of it is very simple. Two years ago an article appeared in *The Times*, in the course of which the writer said the demand for accommodation in Central London could not be met. How was the difficulty to be surmounted? Obviously the business parts of London could not spread outwards; therefore, in order to accommodate the business of London, it might be necessary to modify Acts of Parliament so as to allow buildings to be extended upwards. That idea set fire to a train of thought which had occupied me for some years, because it had fallen to my lot, as an architect, to design five blocks of buildings facing Hyde Park, and two blocks facing the Embankment, during the preceding few years, and I had been impressed with the adequacy of the opportunity which was afforded me for putting up buildings on a proper scale in those fine open positions. And when I saw this thought thrown out in *The Times* I took the opportunity of writing three or four letters developing the idea. Those letters called forth replies, and in the middle of the discussion an extraordinary thing happened. Sir Martin Conway addressed the London Society—conservators, as they claim to be, of the amenities of London—on sky-scrapers, and suggested it would be well to build in London sky-scrapers 500 feet high. That suggestion seized the popular imagination to such an extent that the moderate issue of higher buildings opposite parks, the riverside, and other open spaces and in wide thoroughfares was almost torpedoed; and the movement, instead of running on moderate lines, has been seriously prejudiced by the disproportionate demands of Sir Martin Conway. When the correspondence had gone on for some time, I began to ask myself: "Am I entitled to carry the matter on in this way further? Is it not right that I should bring the question before the Institute?" And I suggested to the then President that I would be prepared to read a paper on the subject. I read the paper, Mr. Austen Hall had read a paper on the question of cubical contents. The Council then appointed a special committee to consider the matter, more particularly from these two standpoints. That is the genesis of this movement, and you will see that at the earliest possible moment I brought it under the purview of the Institute, and ceased to deal with it as an individual. The Council appointed on this com-

mittee a typical list of members, practical men whom they knew were doing solid current work. We took our work very seriously. We said: "We will first devote ourselves to higher buildings, then to cubical contents." We went into great detail as to the various aspects of these questions. Having got together a large amount of information, we thought that before we made our report to the Council we would carry our investigations further; and we adopted an unusual, perhaps, but I think you will admit the very thorough course of deciding to appoint a deputation of our Committee to attend confidential conferences with public bodies who were interested in various aspects of this question. The deputation attended on the Building Acts Committee of the London County Council, the Fire Brigade Committee of that Council, the City Lands Committee of the Corporation of London, the Society of Medical Officers of Health, and subsequently the Incorporated Association of Retail Distributors. Then at last they thought they ought to meet the London Society. We thought we would give them an opportunity of meeting our position.

We sent in our report to the Council, and it has been before you in a recent number of the *JOURNAL*, so I will not take up your time in going into it in minute detail. As regards one point made by Mr. Webb, it is not correct to say that the only support we had was the support of the Retail Distributors' Association. We got support from the Medical Officers' Association and the City Lands Committee. We got support from the Retail Distributors very readily, because they represent the great stores in London—a sort of union of the great stores of London, who are, quite naturally, anxious to develop their businesses. But it is wrong to say that the movement has for its purpose the enabling of the great stores to increase their business by having higher buildings. It is urged as a serious means of giving an opportunity to banking, insurance, shipping, and the purely commercial side of London, because the one square mile of the City—the magical area—is the place required by these great businesses, which are national concerns. It has been shown that the City of London cannot accommodate all the business which has to be done there; by some means extra space must be found, and it can only be found in the City of London by raising the buildings. Suggestions are welcomed by the City Lands Committee, which has the care of the amenities and requirements in question, and those cannot be lightly thrown aside. We are not asking for rows of streets with buildings 120 feet high or 150 feet high. We are asking that the County Council, which has the power to allow buildings more than 80 feet high if it thinks it wise, shall let it be known that in future it will allow them more often than it has in the past. We have to remember that all leases in any one thoroughfare are not likely to fall in simultaneously.

You have had the fact pointed out to you that London and New York are not placed the same geographically; but they have very much the same characteristics with regard to the area required for business, and I harp upon business because that is the staple of the country. The business of London requires more space in these central areas which are chosen as the centres of trade. For example, the City merchant must be near the Exchange for his trade. Take the case of the stores; do you think that if any of the great stores of the West End wished to increase their business accommodation they would go into another district? They will remain in the same place, and under present circumstances they must either be content with what they have or dig underground. One or two speakers said we have only considered the commercial aspect. There would be no apology necessary if that were so, but I deny it; I say commerce and finance are the background of all human activities in such a city as London, and without commerce there would be no demand for architecture and there would be no work for us. It is not a selfish proposition, because I have pointed out more than once that, apart from the good you may do in providing accommodation for the individual and for the needs of the City

and the centre of London, you will be creating a new basis of assessment, because every higher floor will be a subject of a new assessment, and that will be considerable; it will form a security on which local authorities can borrow capital, and with that capital they can do the very thing we want to see done, and that is widen the thoroughfares, for which they have no funds at present.

With regard to fire escape I will not trouble you at length; it means one or two additions. The fire escape problem has been disposed of in other places—Liverpool notably, where the Royal Liver building, some 350 feet high, is an example. A dry pipe runs up from the floor to the top part of the building, and it has a nozzle at the bottom. When a fire occurs, the fireman, instead of carrying up a long hose to the scene of the fire, attaches the hose to this dry pipe, turns the water on, and runs up to the spot where the fire is and at once plays on it. If the force of the water will not carry it more than 80 feet, there is an electric pump which will take the water at that point and throw it higher, just as it does to the top of St. Paul's Cathedral.

With regard to design, it seems to me that the matter is extraordinarily simple. If the Americans can produce, as you saw recently by the exhibition in this room, exquisite buildings at the enormous height of even 750 feet, it is grotesque to speak as if British architects cannot produce buildings quite as beautiful 150 feet high.

But this movement has not been idle; it has produced improvements already. The permission to build buildings to 80 feet to the top level means that another floor 10 feet high can be put in these restricted buildings. There is a striking instance of that. The architect of Harrods' Stores tells me that the immediate effect of that little concession is that Harrods will be able to add four acres of floor space to their existing buildings without buying a square inch of additional land. While we have been talking of higher buildings the County Council have already accepted the principle on a small scale, because there are three instances of it. There is the instance mentioned by Mr. Keen, where Mr. Jones has put up a building in Gracechurch Street, which is 110 feet to the top of the cornice, and the roof is 30 feet above that, making 140 feet altogether. And there is the building put up at London Bridge by Sir John Burnet, and that is 102 feet to the cornice level and 120 feet to the roof. I believe Sir Edwin Lutyens has also obtained a concession for a big building in Finsbury Circus.

I must reserve my other remarks until I submit my resolution to you. What we should have liked the Council to do would be to send back our report, with criticisms and suggestions for emendation, and to have asked us to reconsider it in the light of the facts they might have adduced. But in view of their having rejected it, we cannot ask them to reinstate it, and we cannot, therefore, ask you to condemn the Council for having condemned it. But if I bring on my resolution, I shall ask you, shortly, to consider another aspect of the matter which may, perhaps, appeal to you.

Mr. ANDREW T. TAYLOR [R.F.], L.C.C.: This is a subject in which I am very much interested. I come here in a dual capacity. I have been a member of this Institute for forty-four years, and I am therefore entirely in sympathy with the aspiration of the young members of the Institute and their desire for freedom in designing buildings of every description. But I have also to take a wider view of the case, in connection with my duties on the London County Council as a past-chairman of the Building Acts Committee and a past-chairman of the Improvements Committee, intimately connected with the Fire Brigade work; and as chairman of the Historical Records Committee of the Council I have many points from which to view this question, perhaps more than some of you, and therefore you will forgive me if I try to take a broad view of this problem.

Many of the points have been taken up, and perhaps you will allow me to enumerate them in a word or two. We have to

deal with the traffic problem, and that is an important thing on the Council. There are 15,000 people living in the City of London, but nearly 350,000 come into the City to work, and you know that every means of transport is congested—trams, buses, tubes, railways. One trembles to think what double the number coming into London daily would mean, and that is what might happen if these higher buildings were allowed; it would be a sheer impossibility to get the people in and out of London. We want to separate the people, not to group them in the City of London, and with that in view we have tried to spread London. I have asked this question several times, but I have never yet got an answer to it: Why do you not first of all raise those low buildings which are in and around the City to a height of the permitted 80 feet before you ask for buildings of 150 and 200 feet? In Bloomsbury and in other places you will find hundreds of buildings not more than 50 feet high; why not raise them to the full extent? Then you will nearly double your accommodation, without creating congestion.

The second problem is that of the health of London. As has been pointed out, we have very little sunshine and a good deal of smoke and fog. If you have high buildings, like the one shown in this sketch on the wall, you will never get sunshine into most of the streets. A friend of mine, talking to the manager of one of the largest retail stores, said to him: "You want high buildings in Regent Street, but there is now sunshine on both sides of the street, and people like shopping in the sunshine." He said: "We don't want the sunshine; it is spoiling our goods in our windows and we have to put up sunblinds." That is the point of view of the merchant. He does not want the sunshine. But people like the sunshine, and they will much more enjoy looking at the dresses in the windows of a sunny street than in one that is sombre.

A third point is the amenity of London. Take one of our more recent streets—Kingsway; that is 120 feet wide, and I think you will admit that the buildings on each side of that are high enough. They are 80 feet and 100 feet to the top of the roof. If they were double or nearly double that height, imagine what Kingsway would look like; it would be a gloomy and would seem a narrow street, instead of the spacious one it obviously is now. Again, Regent Street before long will be entirely rebuilt to a height most persons will think sufficient. Allow buildings of 150 or 200 feet high, and the whole symmetry of design and the amenity of the street will be spoiled.

I now come to the chief thing I want to speak about. It has been mentioned by Mr. Joseph. It is that of fire protection, a very important point; certainly in our case the safety of life is one of the most important points. I would like to traverse some of Mr. Joseph's remarks to-night. Our Fire Brigade is quite able to tackle fire in high buildings if you give them the apparatus; but the whole apparatus of the Fire Brigade of London has been planned to suit the present conditions, that is to say, those buildings which are regulated by the Building Acts. They cannot tackle buildings 150 or 200 feet high. For those they would want much heavier hose and stronger pumps and larger fire engines, as well as larger stations to house them in. In New York to-day they have high-pressure fire-pipes or mains all through the streets specially for fires in that class of building. That has cost millions in New York, and if you have them in London to-day it will cost you millions, which would mean an increase of 1s. or 1s. 6d. in the £ on your rates. Are they not high enough already? If you were to attempt to put on pressure of water to deal with these high buildings without special pipes and plant, your pipes would burst and your taps would not be able to stand the strain. Mr. Joseph mentioned the dry pipe system. It is true that is the system in New York, but they have found there that in a great fire they fracture and break, so that just at the time they are depended on to do their work they are of no use. It has been found in the fire brigades in almost all large cities that while fixed fire arrangements are useful to a certain extent, you have to depend in the last resort on the mobile fire

appliances—that is, the fire brigade and their engines. If there is a fire in the lower section of one of these high buildings, how will the firemen get up to operate on the higher parts? They cannot do it, and the result is that, if a great heat is generated, the dry pipes fracture. It is not a question of the existing Fire Brigade—I think there is no finer fire brigade in the world than the London Fire Brigade; but you will have to revolutionise the whole system if you want to utilise it for higher buildings.

The Building Acts Committee of the London County Council is no hard-and-fast and hidebound committee; we are open to listen to anything which you may suggest to us. We have a discretion to allow certain things beyond the Building Acts, and we are doing it. You have heard of some of the things we have allowed in certain positions—buildings higher than 80 feet. We have agreed that, instead of 80 feet and a sloping roof, and two storeys in the roof, you could have, if you set back your wall sufficient to come within a certain angle, buildings up to 100 feet with a flat roof. There has been much misunderstanding about a further concession in regard to buildings of the warehouse and departmental type. Mr. Joseph has taken considerable credit to himself for bringing it about, if one may judge from a recent letter in *The Times*. We have been considering this matter for some time, but it was brought to a head by resolutions we received from the Council of this Institute. We took immediate action; we conferred with our Fire Brigade, and acted. What we have done is this. It does not add an inch to the external height of the buildings; formerly it was 60 feet, and recently we raised it to 65 feet to the topmost floor, with unlimited ceiling space. Now we are permitting 80 feet to the topmost ceiling and you can get another floor in. It is immaterial to me how many floors you get, as long as you do not raise the total height of the building. We are only too anxious to let people have the other floor if they desire it.

Mr. Keen pictured a very pleasant scene in the vicinity of London Bridge, and I agree. But you know a new building is contemplated on the site of the old Pearl building. The first plans we had went up to a great height. I said to the illustrious architect: "You will be much higher than the beautiful tower of St. Magnus; what is to become of that?" He said: "Oh, that must go." We also had some plans for a building in Finsbury Circus going 200 feet up; in fact, we had a plan for one of 400 feet, with offices to the top. We have now got it down to reasonable limits. We are willing to consider exceptional cases; but we do not want these to be put formally into Building Acts. We want to have discretion, and you will find that we shall exercise that discretion reasonably.

Mr. DAVIDGE: I move that the motion be now put, sir. In doing so I would say that Mr. Joseph has invented the definition of a sky-scraper as a building over 500 feet high. That would mean there are only four sky-scrappers in the world.

The PRESIDENT: Does anybody second that?

A MEMBER: Certainly.

The PRESIDENT: I now put to you the motion, which is:

"That this general meeting of the Royal Institute of British Architects approves the action taken by the Council in connection with the Report of the London Building Acts Committee."

There voted for 79, against 8.

The PRESIDENT: The motion is carried.

Mr. JOSEPH: At this late hour, I shall propose to submit the resolution in this form:

"That this meeting approves the general principle of allowing buildings to be erected in certain positions to a greater height than is at present the practice, subject to proper safeguards as to construction, fire escape, and fire attack."

The purpose of this resolution is not to commit you to any special heights; it is to put the matter rather back to the position it was in during the early stages of the investigation by the Building Acts Committee, and to enable the height and surroundings to be a subject of further study. Those who have

worked with me for the last eighteen months, conscientiously, and, we believe, in the public interest and not adversely to the interests of our own profession, think that you should not unreasonably be asked—whilst approving the action of the Council in rejecting specific recommendations made in our report—to give us some acknowledgment and encouragement, and still leave this important topic open for further consideration, by passing a resolution in simple and innocuous terms, by which the principle of higher buildings is accepted, subject to further investigation and subject to proper safeguards. I put it before you, not merely on the ground that I think the work of this Committee should have further thought before it is finally pigeon-holed, but on broad lines. It is in the public interest, it is in our interest. What we are asking is something which will react favourably towards the whole community. Therefore I move the resolution which stands in my name.

Mr. AUSTEN HALL [F.], in seconding the motion, said: I did not know until this morning that I should be able to come to this meeting, but what has been said covers, I think, the ground on all points. This is not a question of a vote of confidence in the Council; it is a question of obtaining an expression of opinion from members on the whole subject of higher buildings. I have, therefore, no hesitation in supporting Mr. Joseph's suggestion, which is to approve the general principle of allowing buildings to be erected to a greater height than 80 feet, subject to proper safeguards. It seems a safe resolution to pass. I have a number of notes on points which I will not go into now. Various members have said repeatedly that no attention whatever has been given to the question of fine architecture in relation to increased heights of buildings. It has been my privilege to look at this subject in other countries, particularly the United States and Canada. We have heard much as to the latitude of New York which is very misleading; but the latitude of Montreal and other cities in Canada is very much the same as ours, and in the degree of sun also. Yet in Montreal 120 feet is allowed, buildings with ten storeys, and the results are eminently satisfactory. Professor Percy Nobbs has designed some very charming buildings in Montreal, of a standard height of 120 feet. The conditions in Montreal so closely resemble those in London, and the results are so delightful, that to say it is devastating to architecture to build 20 feet higher than at present seems ridiculous to those who have seen 120 feet high buildings in suitable positions—I do not agree they should be in the City. It would be a tremendous stimulus to architecture if in certain places, notably the Embankment, we could get a renaissance of architecture. To say that that side of the question has not received attention is not correct. The work of this Committee has been unduly prolonged owing to the amount of information it had to collect, and it has covered much ground. When the matter was broached to the Council it was sent as a suggestion of what could be done; it was disappointing to have it turned down, and to have the Committee abolished without a further reference being asked. I felt disappointed that the useful results which could have been obtained will not now, perhaps, be possible.

Owing to the lateness of the hour, I will not go into the points I have made a note about; but I beg those who have seen buildings 120 feet high to consider how satisfactorily they can be designed, and how interesting they are when in proper relationship with the other buildings in the street.

Sir ASTON WEBB, P.R.A.: I could not see what Mr. Delissa Joseph's resolution meant, but he has told us in his speech what it is; and I must confess that I shall vote against it. He said that it was to leave open this question of higher buildings. I think after we have spent the whole of this evening and decided the matter so emphatically, that we should shut down this question. Let it be distinctly understood that this Institute is averse to increasing the height of buildings as suggested in the Committee's report. We are perfectly content to leave it in the hands of the County Council, as it has been hitherto. I

happened last night to be reading Mr. McCurdy's translation of Leonardo da Vinci, who had a way of writing down things which occurred to him. He said: "Let the street be as wide as the universal height of the buildings." That is what Leonardo da Vinci said in his time, and it seems to me we could not say anything better at the present day.

There is one other thing I would like to say: there has been a good deal of talk about the County Council's laws restricting the heights of buildings, etc., which is not done in other towns in England. But why did they bring in that law? I think the reason was Queen Anne's Mansions. I have the misfortune to live almost under the shadow of them, and to think of Queen Anne's Mansions being duplicated all over London is sufficient, I think, to condemn the idea. Queen Anne's Mansions towards the street is bad enough, but Queen Anne's Mansions at the back towards the Park is very much worse; it is a conglomeration of brick walls and windows, shapeless and hideous. It is not altogether the fault of the designer; he got into great difficulties at the back; the Guards threatened him with all sorts of things; he had to arbitrate, and the arbitrator made him put in all that white glazed brick. The beautiful park is spoilt by the view of Queen Anne's Mansions; the view from Buckingham Palace generally is spoilt by the same cause. If you put up buildings like that, you will destroy the amenities of London. We cannot pull down the Mansions, but surely we can insist that there are no other buildings of the sort put up in London in our time. If we do not do that, we are not worthy of our name as architects of a great city; we shall go down to posterity condemned, and very properly condemned.

Mr. OSWALD MILNE (F.): I think it would be most unfortunate if it were to go out that this Institute supports the London Building Act as to the heights of buildings as the regulation is at present. Very few of us think that the London Building Act at present is a sound thing; it extends to all parts of London, the City and the residential parts alike. We can only build to 80 feet high, with two storeys in the roof; that is too high in residential parts, too low in others. But for the idea to go to the public that this Institute accepts the Act seems to me to be a reactionary and very conservative policy.

The other thing which seems to me absurd is that this Institute should say (I know our Council uses its powers extraordinarily well) that they endorse the power of the County Council to turn down proposals for high buildings in some cases and allow them in others. That is not business. If a man buys a site, he ought to be in a position to know exactly what he can do with it. At present he buys it and hopes the County Council will let him go higher, but he knows they have discretion to prevent it, and he is put to much trouble and expense before he finds out what he can do on the site. We were told many years ago that before a man built he should sit down and count the cost. But in London he cannot do that; he is entirely at the discretion of this County Council committee. The business man knows he is "up against it"; he will think that architects are reactionary people who do not want to help him, and that if he is to get what he wants he must, in certain districts, go to somebody who is not a qualified architect. We do not want skyscrapers, but we do want to think the matter out and say how the community who want higher buildings can get them in a reasonable way. If you would not limit the height to 80 or 100 feet, but allow within a certain angle much higher buildings, it would encourage business people. It would encourage big companies, especially in the City, because that is where big buildings are required. It would encourage the purchase of large and deep sites where buildings can be built with towers. Is it better to have limited buildings, with many working in them under the level of the street, than to have fine buildings with towers where there is fresh air and light? These buildings can be erected without obstructing light and air. I think we architects ought to be the leaders and guides of the community with regard to building matters in every way. If we in this Institute accept the idea

that the limit of height of buildings as it at present stands is the last word, I think we will be regarded as a reactionary and conservative profession.

Mr. W. R. DAVIDGE: I wish to oppose the passing of this resolution. Our Council has considered the question from all points of view. It has already achieved a distinct improvement in the London Building Act. We are not in the hands of cast-iron rules, and it should be pointed out that the London County Council have full power to deal with each case on its merits. I protest against the proposal made by Mr. Joseph's Committee that we should have 120 ft. buildings all over the City. Here is an American paper, published by the National Housing Association of New York, which, dealing with the question of high buildings in London, refers to this agitation as follows. It says: "The chief advocate of this course is Mr. Delissa Joseph, a London architect, who seems to return to the attack with great pertinacity, having urged two years ago similar proposals. It is rather extraordinary, in the face of the experience of such cities as New York, Chicago, and other American communities of the very detrimental effects of unduly high buildings, that London, which has been free from this blight, should at this late date be in danger of having it inflicted upon her." And here is the opinion of Mr. Hastings, our newly elected Royal Gold Medalist, in a statement for the Heights of Buildings Commission of New York City. He says: "Where I believe we American architects so often make a mistake is that we present our case as an appeal for aesthetic consideration and for the general appearance of a city. In my opinion it is not a question of art, but of sanitation and of justice and of law."

Mr. Hastings goes on to say: "The argument that New York is on a narrow island is without effect when we realise that the lower and narrow part of New York, within a stone's throw of Broadway, is not rebuilt, and much of this property is only three or four storeys high."

The Council of the R.I.B.A. has had the facts before it and has decided on a sound course of action—namely, that every case must be considered on its merits, but that there is no general case for higher buildings. It would be lamentable if we were to pass this resolution, which would be going back on the resolution we passed earlier. It may look harmless, but I know harm will be done by it if it goes through. It will be advertised, and wrongly advertised, that the Institute is in favour of higher buildings everywhere. You know how falsely the campaign of the Committee was represented as the policy of the Institute, and you know how that false report was brought about; it was by premature publicity by members of this very committee.

Mr. JOSEPH: On a point of order. This statement by the last speaker with regard to premature publication has been dealt with in the report of the Art Standing Committee, which is before you; and the Building Act Committee, having had that report, passed unanimously a resolution, which was forwarded to the Council, repudiating the statement that any campaign through the Press had been organised or conducted or influenced by the Building Act Committee. The only communication of an official character sent to the Press was one I submitted to you. Though the report had been issued, it had not been considered and approved by the Council. Therefore I ask you to call upon the last speaker to withdraw.

The PRESIDENT: I would point out that it is irrelevant to the present discussion.

Mr. DAVIDGE: On the question of fire protection mentioned by Mr. Joseph, the Chief of the New York Fire Insurance Exchange says: "We have had no tests of the value of standpipes in tall buildings. The difficulty is that no human being could withstand the heat, which often rises to 1,800 degrees." And Mr. John Kenlon, Chief of the New York Fire Department, says that he considers 85 feet to be the ideal limitation on height. I am content to accept the evidence of New York. I am sure the meeting will do well to put itself in the hands of the Council rather than in the hands of the popular Press, which

will not always stick to the facts, especially in technical matters such as that now under consideration. I shall vote against this proposal.

Professor BERESFORD PITE [F.] : I can only say that this is not a new question. Have we not all lived in London and practised in London and thanked God for the low streets with which London is surrounded ; have we not thanked Him for the rays of light, of sunlight that a prescriptive right allows to penetrate into the City ? I worked in City offices for many years, and I view with alarm the fact that Mr. Joseph is blind to the pointed arguments which are addressed to the heart of this question. He has not answered one of the serious questions about the light, the amenities of the City, the escape from fire—in fact, human life. The stand-pipe fallacy does not touch the root of the matter. You will have huge populations in positions inaccessible to the fire brigades ; and I hope the expression of opinion we have given this evening will be taken as conclusive, and that we shall not allow the slightest doubt to be felt by the public at large as to the attitude which the Institute takes.

Mr. W. E. VERNON CROMPTON [F.] : The motion makes no reference to proper safeguards with reference to traffic or to services or architectural amenities ; and there must have been some definite reason for leaving them out. For that reason I have the more confidence in voting against this resolution. Lastly, I think it will help us to look at this matter in proper perspective if we realise that the question of high buildings in London has a definite relation to what we are dealing with in London, and that is congestion of street traffic. You cannot separate the one from the other ; they are interlocked. Therefore the only way this problem can be dealt with scientifically, organically, and in a reasonable manner is to adopt the suggestion mentioned by Professor Adshead : we must have a plan of London, properly done, and then we shall be able to make up our minds as to whether we can allow certain buildings higher than at present on certain positions.

Mr. JOSEPH : I waive my right of reply, in view of the late hour.

The PRESIDENT : I do not wish to deprive you of your rights in the discussion.

Mr. JOSEPH : I wish to waive my right of reply. I could reply, and at great length. After the patient way in which you have listened to me I will not inflict another speech upon you.

The PRESIDENT : The resolution is :

" That this meeting approves the general principle of allowing buildings to be erected in certain positions to a greater height than is the present practice, subject to proper safeguards as to construction, fire escape and fire attack."

12 voted in favour, 51 against.

The resolution was lost.

Mr. G. E. Pearse [A.] has been appointed to the Chair of Architecture at the University of Witwatersrand, Johannesburg, where he desires his correspondence to be addressed.

Mr. Andrew T. Taylor [F.] a member of the London County Council, has been appointed a member of the following committees of the L.C.C. : Building Acts Committee, Establishment Committee, Improvements Committee, and the Appeal Committee.

Major Douglas Wood, F.S.I., A.R.I.B.A., the Housing Commissioner at Nottingham, in charge of the housing schemes in the ten Midland counties, forming the Regions E. and F., is leaving Nottingham on 31 March, when the Regional Offices finally close, and is taking up a special appointment at the Ministry of Health, Whitehall, S.W.1.

Obituary

HERBERT A. SATCHELL [F.].

It is with great regret that the announcement of the death of Mr. Herbert A. Satchell has been received by members of the Institute, and especially by members of the Practice Committee, on which he did such invaluable work. Mr. Satchell was elected an Associate in 1888, and was awarded the Essay Medal in the same year, the subject being "The History of the Developments of Church Planning from the Beginning of the Christian Era." He was elected a Fellow in 1906. Mr. Satchell died suddenly at Torquay on 15 March, after a very short illness.

HOLMAN : LIEUT.-COLONEL G. E. [F.], of the firm of Holman & Goodrham, on 5 March 1922.

ELWES : R. G. [*Licentiate*].

VASEY (J. M. H.) [*Licentiate*], died on 3 March 1922.

Competitions

AUCKLAND WAR MEMORIAL COMPETITION.

The second set of Questions and Answers has been received, and is available for inspection in the Library.

R.I.B.A. COLOUR COMPETITION.

Questions and Answers may be seen in the Library.

COMPETITIONS OPEN.

Auckland War Memorial.
R.I.B.A. Colour Competition.
Dundee War Memorial.

The conditions and other documents relating to the above competitions may be consulted in the Library.

BOARD OF ARCHITECTURAL EDUCATION.

STUDENTS' EVENING AT R.I.B.A.

On Wednesday, 15 March, a highly successful Students' Evening was held at the Exhibition of Architects' Working Drawings in the Galleries of the R.I.B.A., 9 Conduit Street, W.1. Mr. A. J. Davis and Mr. C. H. Gage were present and explained the special points of interest in the *Morning Post* Building, while Mr. Dennington, representing Mr. Ralph Knott, gave information about the New County Hall. There were about eighty present, and several important questions were discussed.

The Board of Architectural Education have made arrangements for holding the Exhibition annually, when work representative of all classes of architecture will be exhibited.

THE INTERNATIONAL BUILDING TRADES' EXHIBITION, OLYMPIA, 1922.

The attention of members is specially called to the programme, sent out with the present number, arranged by the Architects' Welcome Club in connection with the International Building Trades' Exhibition at Olympia (11-27 April inclusive).

Members are *particularly requested* to make personal use of the Special Card of Admission which is enclosed with this number of the JOURNAL. Through the generosity of the organisers of the Exhibition the use of these cards will materially benefit the funds of the Architects' Benevolent Society.

MODERN BUILDING EXHIBITION AT TURIN.

The first exhibition held in Italy specially devoted to the art of building will be opened in Turin on 8 April and will last to 21 May 1922. The exhibition will be held during the meeting of the National Congresses of Italian Engineers and of the Association for the Study of Building Materials. It has been organised by a group of engineers, architects, and constructors, with the assistance of the Government and the local authorities of Turin. In addition to the exhibition of building materials and methods of construction, there will be a special annexe devoted to plans and models of buildings and of furnished houses. The exhibition will be held in the Stadium in the Corso Vinzaglio.

Members' Column

PERSONAL.

MR. A. A. HUDSON, K.C., of 5, Paper Buildings, Temple, E.C., and 44, Mount Street, W., desires it to be known that he has not recently or at any time been a Candidate for the London County Council, and that he is the only K.C. of that surname who has been called within the Bar in England.

ASSISTANT WANTED.

ASSISTANT wanted in Architectural Department, with experience in drainage schemes for large buildings, such as Hotels, Stations, etc., and having knowledge of Railway work; should be A.R.I.B.A. Permanency to suitable man. Must be good surveyor. Salary £350 to £400 according to qualifications.—Apply Architect, North Eastern Railway, York, by 31 March.

PARTNERSHIPS.

AN ASSOCIATE, 39 years of age, is desirous of a Partnership or appointment as Assistant with a view to Partnership. Special experience in schools, hospitals, commercial and domestic work. Previously engaged as a County School Architect. London or Home Counties preferred. Highest credentials and references.—Apply Box 899, c/o Secretary R.I.B.A., 9 Conduit Street, W.

A.R.I.B.A. desires a share in well-established Practice, Provinces preferred. Would like to supervise or commence a Provincial Practice in connection with one already established in London. Age 31. Six years' office experience (general practice) and two years School of Architecture, University College, London. War Service.—Box No. 1732, c/o Secretary R.I.B.A., 9 Conduit Street, W.1.

MESSRS. MILLS & MURGATROYD.

MR. ARTHUR J. MURGATROYD has taken Mr. James Hemmrow, A.R.I.B.A., into partnership. The firm will be carried on under the old style of Mills & Murgatroyd, practising at 23 Strutt Street, Manchester, as architects and surveyors.

MESSRS. J. HATCHARD-SMITH & SON.

MESSRS. J. HATCHARD-SMITH & SON have moved their offices to 11 Haymarket, S.W., the lease of their offices at 6 Duke Street, Adelphi, W.C., having expired on 25 March.

APPOINTMENTS WANTED.

A.R.I.B.A., ex-officer, 37, married, two children; fifteen years' experience. Engaged as Assistant Architect by Ministry of Health on Housing for over two years. Now under notice to terminate engagement owing to reduction of staff. Present salary £500. London area preferred.—Apply Box 1032, c/o The Secretary R.I.B.A., 9 Conduit Street, W.1.

ASSOCIATE, disengaged, desires appointment as Responsible Draughtsman. Twenty years' all-round experience in Glasgow, London, Toronto, and Birmingham. Fully qualified in design, construction, details, supervision, quantities, perspectives.—Apply Box 9322, c/o Secretary R.I.B.A., 9 Conduit Street, London, W.1.

A.R.I.B.A., age 31, shortly disengaged, twelve years' varied experience (exclusive of four years' war service), desires Responsible Post, or with a view to Partnership. University architectural training with distinctions; used to best class work. Excellent references include three years Chief Assistant.—Write Box 473, c/o Secretary R.I.B.A., 9 Conduit Street, W.1.

F.R.I.B.A., with connection of twenty years' standing pre-war, six years' war service, competition expert, wishes to join busy Firm with a view to Partnership; this country or abroad.—Apply Box 1632, c/o Secretary R.I.B.A., 9 Conduit Street, W.1.

A.R.I.B.A., 26, desires post as Assistant; town or country. Working drawings, details, surveys, quantities. Sound practical knowledge in all branches. Highest references.—Apply Box 745, c/o Secretary R.I.B.A., 9 Conduit Street, W.1.

A.R.I.B.A. desires responsible position. Nearly twenty years' experience on banks, offices, shops, warehouses, flats, hotels, hospitals, baths, housing and domestic work. Used to charge of office and works building.—Box 2032, c/o Secretary R.I.B.A., 9 Conduit Street, London, W.1.

LICENTIATE R.I.B.A., 26 years' London experience, desires architectural work of any description. Own or employer's office. Whole or part time. Good designer and draughtsman and used to responsibility.—Apply Box 203, c/o Secretary R.I.B.A., 9 Conduit Street, W.1.

Minutes XIII

SESSION 1921-22.

At the Tenth General Meeting (Ordinary) of the Session 1921-1922, held on Monday, 20 March 1922, at 8 p.m.—Mr. Paul Waterhouse, President, in the chair. The attendance book was signed by 23 Fellows (including 7 members of the Council), 21 Associates (including 2 members of the Council), 2 Licentiates, and a large number of visitors. The Minutes of the Ninth Meeting held on 6 March, having been taken as read, were confirmed and signed.

The Hon. Secretary announced the decease of the following members: Mr. Herbert A. Satchell, elected *Associate* 1888, *Fellow* 1906, Royal Institute Essay Medallist 1888, Hon. Secretary of the Practice Standing Committee 1909-1913; Lieut.-Colonel G. E. Holman, elected *Fellow* 1921; Mr. V. A. Edlin, elected *Licentiate* 1911; Mr. H. A. Emmett, elected *Licentiate* 1911; Mr. J. M. H. Vasey, elected *Licentiate* 1912; Mr. R. G. Elwes, elected *Licentiate* 1911. The Hon. Secretary also announced that the news had just been received of the sudden death of Mr. J. H. Sabin, President of the Surveyors' Institution. It was *Resolved* that the regrets of the Institute for the loss of these gentlemen be recorded on the Minutes of the Meeting and that a message of condolence and sympathy be conveyed to their relatives.

Mr. H. D. Searles-Wood [F.], Vice-President, having read a paper entitled "The Building Timbers of the Empire," a discussion ensued, and on the motion of the Right Hon. Sir Joseph Cook, G.C.M.G., High Commissioner for the Commonwealth of Australia, seconded by Professor Wyndham R. Dunstan, C.M.G., F.R.S., Director of the Imperial Institute, a vote of thanks was passed to Mr. Searles-Wood by acclamation, and was briefly responded to. The proceedings closed at 10.5 p.m.



Building Timbers of the Empire

By H. D. SEARLES-WOOD, VICE-PRESIDENT R.I.B.A.

THE Timbers Committee of the Imperial Institute has been engaged for five years in investigating the resources of the Empire, during which time it has considered a large number of different woods, specimens of which can be seen at the Imperial Institute. I give in an appendix a list of them. Out of this list the Committee has selected about 40 woods which it regards as suitable for the building and furniture trades in this country.

The Committee is careful to ascertain whether the timber can be obtained in quantities sufficient to make a commercial success if introduced into this country, and in several instances careful mechanical tests and practical trials have been made before the selection has been settled.

In conjunction with the Empire Forestry Association the Committee propose to bring together samples of Empire timbers in a special collection at the Imperial Institute in order that users of timber may ascertain the varying characteristics of the woods, from different parts of the Empire, and obtain full particulars of each timber to assist them in making their selection. It is hoped that this systematic exhibition will be used by the trade and the public, the success of the Timber Exhibition of 1920 having shown the need of such a collection. It is also under consideration to form a representative collection of those important timbers which the Committee has selected, and to send them round to important centres in the country; and our Allied Societies could give valuable help in this scheme. The Conjoint Board of Scientific Societies prepared

for the Royal Aeronautical Society a short list of standard names. I have given this as an appendix, as standard names for timbers would save endless confusion, and a complete list should be made which could be accepted by timber users and the timber trade.

The home-grown timbers of the United Kingdom are alder, ash, beech, birch, box, chestnut, elm, silver fir, holly, hornbeam, larch, lime, oak, plane, pine, poplar, spruce, sycamore, walnut, willow and yew.

With regard to the soft woods, the timbers commonly used and required by architects which they understand can be grown in the United Kingdom are red wood, white wood, and American yellow pine. Scots pine was the only wood used in many of the ancient Scottish castles, where it has withstood the wear and tear of centuries and remains sound until the present day.

Of the hard woods, at one period British timber held a world-wide reputation. British ships constructed of British oak were pre-eminent. The same timber was held in high esteem for building purposes, and was extensively employed for cabinet and other work.

In home-grown oak there are two main varieties—white and brown, both of which abounded in our forests in the past. Turkey oak, introduced into this country about 170 years ago, is in many respects similar to American red oak, and is of practically no value. It runs heavily to sap, and is often shaky. In appearance it is more of an ornamental tree, and the acorn cup is spiky—not smooth, like the white oak cup.

I have been fortunate in getting from Mr. Fraser a most excellent sample of Turkey oak, which you will find among the samples shown. You will see that this sample carries heavy sap, but the amount is by no means exceptional, for many Turkey oaks are practically all sap. In addition you will notice the heart shakes.

Home-grown white oak varies enormously in texture and value, according to the district in which it is grown. For instance, oak from a county like Cornwall is small and coarse, and suitable only for wheelwrights' work. Oak from Sussex is splendid, but inclined to be hard. Oak from Northamptonshire, parts of Essex, Suffolk, Oxford, Lincoln, and so forth is of good size and mild in texture. Home-grown white oak is in demand for many classes of heavy work, but it also supplies some of the most beautiful panelling.

When wood grows old it becomes impregnated with waste products and gets darker in colour. If you compare the two samples of English quartered oak, you will see that the one which is cut from an old tree is much darker and richer in tone than the one which is cut from a young tree.

Some of these woods are still used for certain work, but for various reasons foreign timber had, before the war, largely displaced that of home growth, and several kinds of wood that had from time immemorial enjoyed a high reputation for strength and durability and beauty of finish were neglected by architects. Foreign woods, sometimes of distinctly inferior quality, placed upon the market in an attractive manner, came into fashion and the more solid British product was neglected. I have here a sample of American oak showing a peculiar form of shrinking, for which I can find no explanation. It shrinks on the heart edge. Although the importance of British oak is a tradition, architects have refused to specify British oak for panelling, flooring, and other purposes on the plea that it is unsuitable and inferior to wood of foreign growth, notwithstanding roofs, staircases, and panelling of undoubted British oak are the features of many old English churches and houses, where they have stood the test of centuries.

At the present time, in the two most important buildings now being erected, the panelling is Japanese and Austrian oak and Italian walnut.

The war created a reaction to a certain extent. Imported woods became scarce, and people who had relied entirely upon them were obliged to use

the home-grown products, and they were agreeably surprised to find that they possessed virtues with which they were unacquainted. But the best home-grown timber was comparatively scarce, and, owing to the heavy cutting during the war, the stock of growing timber in the British Isles was never lower than at present. Of many timbers there is bound to be a shortage for many years, but oak, elm, ash, poplar, willow, hornbeam, sweet chestnut, beech, birch, sycamore, alder, plane, pine, spruce, larch, and silver fir are trees that will provide a large quantity of timber for building purposes.

It is essential that the timber resources of the United Kingdom should be increased, but if timber must be grown it must be on business lines, and in time the National Forest Service and the privately owned forests must be self-supporting and capable of producing a dividend on invested capital. To help in this, users of wood should insist on home-grown wood being used wherever possible, and architects are especially asked to see to this when specifying for buildings.

The architect's difficulty in regard to the use of home-grown timber for building purposes is the lack of "availability" due to the defective organisation of the home-grown timber market, and to lack of "reliability" due to bad afforestation.

One of the chief points is the defective transport facilities of the country, and until this is thoroughly overhauled perfect organisation in other directions will be heavily discounted.

It is essential that home-grown timber should be put on the market in a mature condition, properly graded and in recognised standard scantlings marked with the year of felling, properly seasoned and of good quality, sold in yards which are well situated for transport, and in sufficient quantity to supply a reasonably large demand.

In the report on the condition of the roof of Westminster Hall the following conditions to be observed when obtaining oak were laid down:—

- (a) The timber should be open grown oak in park situations, or grown as coppice and standard.
- (b) The soil in which the timber is grown should be known, and should be a stiff, retentive loam.
- (c) The species of oak should be *pedunculata*; sessile or *durmast* oak should not be used.

(d) Timber should all be winter felled, and no spring or autumn felled oak should be used.

(e) The timber should be at least two to three years fallen before converted, and for great constructional purposes pieces of what is called the "prime log" only should be used, *i.e.*, the butt end of the tree from the root to the first out-throw of a big branch.

(f) If possible the oak should be seasoned for six months under cover after being cut to the scantlings in which it is to be used.

It is found that oak used for structural purposes, if cut from trees from which large horizontal branches spring, opens in serious shakes under stress.

Timber merchants as a rule can give no information as to the species of oak from which the timber has been cut. In addition they have no note of the soil on which it has been grown, nor would they appear to have very definite records as to the time of felling.

Reliable estimates should be made of the timbers available in this country for building purposes, and tables prepared for the next fifty years until timber planted now is ready for the market. These tables should be in the hands of every timber merchant. Emphasis should be laid upon the principle of the supply creating the demand rather than the demand creating the supply.

The question of soft woods is more urgent than that of hard woods. Forests are being depleted in Europe and America, and immature and dead timber is finding its way on to the market in increasing quantities.

The following is a brief account of the more important timbers of the Overseas Empire:—

CANADA.

The best European timber for building purposes is the Scots Fir (*pinus sylvestris*). It grows in the United Kingdom from 60 to 120 feet in height, and with trunks $1\frac{1}{2}$ to $3\frac{1}{2}$ feet in diameter. It is imported from Northern Europe under various names such as red and yellow deal, redwood, and deal with the names of various ports as prefix. The use of the word "fir" in connection with this wood should be discontinued, for it has nothing to do with the tree fir. As this timber is the standard on which the constants in our formulæ are based, and the scantlings of the various converted timbers are

cut in the search for new sources of supply for soft woods for building purposes, *Pinus sylvestris* has been used as the control for the comparison of strengths. Most of this wood comes from the Baltic and White Sea, and until the European forests are more cut it will be difficult for the Empire timber to compete in price, as freights from Eastern Canada in normal times are from 20 to 30 per cent. more than from the White Sea, 25 to 50 per cent. more than from Sweden, Petrograd and Riga. From Western Canada freights are more than double than from Eastern Canada.

The great factor in all questions of the use of a bulky and comparatively cheap article like constructional wood is the freight, and even though the Panama Canal has reduced the time a vessel with a Pacific wood cargo on board occupies in her voyage, the difference in the distance the wood has to come will probably curtail the use of it for a long time. When freights become more equal, then the Pacific mills will lay themselves out to cater for the English markets. At present from 1 to 2 per cent. of their output only comes to Europe.

With Dr. Chandler's permission I have taken the bulk of the following notes from his article on "Useful Timbers of the British Empire in Modern Building."

From Canada the principal soft woods are spruce, Douglas fir, Western hemlock and white pine.

DOUGLAS FIR (*Pseudotsuga Douglasii*, Carr.).—This timber is known under a variety of names—*e.g.*, Oregon pine, British Columbia pine, British Columbia fir, red fir, yellow fir, Douglas spruce. The tree occurs from Northern British Columbia to Mexico, and reaches its best development in southern British Columbia; in Canada it extends eastwards to Alberta. Its average height is from 150 to 255 feet, with a diameter of from 3 to 6 feet. Two forms are distinguished—*viz.*, the mountain form, growing in the hinterland regions of relatively light rainfall; and the coast form, found in the lowland areas where the rainfall is heavier. The timber exported is said to consist almost exclusively of the coast form. The wood is one of the hardest, heaviest and strongest of Canadian coniferous timbers, and, when properly seasoned, is fine, sound and clear. The sapwood is narrow, and the heartwood varies in colour from light yellow to a decided yellow tinge. The number of annual rings per inch is commonly between twelve and sixteen (rarely less than eight), the dark summer ("autumn") wood

being well developed and hard, while the spring wood is soft and much lighter in colour. The wood is usually of uniform growth and comparatively free from knots and resin.

The average weight of the dry wood is approximately 28 lb. per cubic foot.

USES.—Douglas fir has long been known in European markets under the name of Oregon pine supplies being chiefly derived from the United States. Recent years, however, have seen a great development in the lumber trade of British Columbia, and the timber of *Pseudotsuga Douglasii*, Carr., derived from that country, is now marketed as British Columbia Douglas fir. Although well known in Europe, experience with Douglas fir has been gained chiefly in the United States and in Canada. The timber is obtainable in very large dimensions, sticks 100 feet and over in length and 2 feet square being readily supplied by mills in British Columbia. This fact, combined with the strength, durability and lightness of the timber, and the ease with which it can be worked, renders Douglas fir of special value as a structural timber for railway cars, piling, docks, building timbers, bridge and trestles timbers, ships and barges. It is also suited for sashes and doors. As inside finish (e.g., in the form of veneer) Douglas fir is considered to possess special qualities in its hard surface, beauty of grain, freedom from warping and shrinking, and ability to take stains and varnish. It does not take paint well, as the grain shows through. There is in England a prejudice against Oregon pine due to the fact that the timber is not properly seasoned before shipment, and the long voyage caused the timber to have a bad appearance when it reached English ports. There is no reason why properly seasoned Douglas fir should not be as free from decay as any Baltic timber or pitch pine.

SOUTHERN PINE.—A term which embraces several species of timber, of which long leaf or pitch pine is the most familiar to English users. Most of the wood required in "timber" sizes 12 by 12 and 17 by 17 ("timber" is the trade name for square stuff over 11 inches square) used in Europe since the gradual falling-off of Baltic fir timber is southern pine. Loblolly is disliked generally. The disadvantage of pitch pine is its inherent tendency to shrink, even if planed some years after import. It is quite true that it is harder and stronger in tensile strength than Baltic fir. Owing to its length generally averag-

ing 30 feet, it is a most useful timber for carpenters' work. Douglas fir can also be obtained in long lengths and is more regular in strength.

BRITISH COLUMBIA SPRUCE.—Also known as sitka, silver or tideland spruce. This timber (the largest of Canadian spruces), familiar in the English market for many years, is now one of the best known of Canadian timbers on account of its extensive use in the manufacture of aircraft during the war. The straight, even grain, toughness, elasticity, and lightness of the wood (20 lb. per cubic foot, kiln dried), together with the long, clear lengths in which it can be obtained free from knots and other blemishes, establish it with few rivals for aeroplane work. The timber is white, with a fine silver sheen, and is free from resin, and without noticeable taste or smell. It works easily and smoothly, does not warp, takes paints and stains well, and has good nailing qualities. The wood is used for a great variety of purposes in Canada and Western America—notably for the inside and outside finishing of buildings. Only the finest selected timber is used for aircraft work, and the remaining material should find a ready market for building purposes mentioned above, for which the perfect qualities required for aeroplanes are not so essential.

WESTERN HEMLOCK is not so well known over here as it is in Canada. It constitutes 18·3 per cent. of Canadian commercial timber, and, like the others, grows to a large size. Even in Canada its good qualities and value are not so well known as they will be. For ordinary building purposes it is equally as useful as Douglas fir. It has 88 per cent. of the strength of its biggest brother, and is not so suitable for the heaviest type of construction, but it makes excellent siding, flooring, ceiling, scantling, inside joists, etc. For sash and door fixtures, turned stock, panelling, etc., it has exceptional merit.

Western hemlock is usually light in colour, and contains no pitch or resin. It dresses to a smooth, satin-like surface capable of taking a very high polish, and is not easily scratched. Sawn slash grain it shows a very handsome figuring. Western hemlock takes paint well, and for enamel finish is perfect. Edge-grain hemlock flooring has proved invaluable. It hardens with age, and there is an instance on the Pacific coast where it has been down for 50 years and is now so hard that it is difficult to drive a tack in.

As regards Eastern Canada spruce forms the bulk

of the timber exported to this country, white spruce heading the list ; it is gradually taking the place of white pine, for which it is a good substitute for many purposes. It should be more extensively used in this country for carcasing and general construction work. Its weight is 25 lb. per cubic foot.

RED SPRUCE from Quebec and the maritime provinces is used for the same purposes, and is preferred for joinery. Weight, 32 lb. per cubic foot.

BLACK SPRUCE is the strongest and most durable of the spruces, and should find wider application in this country for carcasing and construction work generally. Weight, 28 lb. per cubic foot.

WHITE PINE.—This valuable timber, also known in this country as yellow or Quebec pine, stood second among Canadian timbers in 1919 both as regards production and value. Over 70 per cent. of the cut is obtained from Ontario. The wood is light, soft, straight-grained, free from resin and easily worked ; it holds nails well. Though not strong relatively, it is probably used for a greater variety of purposes than any other Canadian timber. Its chief uses are in construction work where strength is not essential. It is a favourite material for deck-planking, sashes, doors, and finishings, while the slabs and edgings resulting from conversion are manufactured into shingles and laths. Under the name of "cork pine" the wood is extensively employed in making matches. The cheaper grades are largely used for boxes and crates. In the United Kingdom white pine is well known as a most valuable wood for engineers' "patterns" on account of its even and uniform grain and easy working. It was formerly much more widely used in this country for general purposes, but American competition for supplies has considerably affected exports to this country. Weight, 24 lb. per cubic foot.

EASTERN HEMLOCK.—This timber (also known as "hemlock spruce" and "hemlock fir") stands high among Canadian timbers in point of quantity cut. It is much inferior to British Columbia western hemlock. The wood is reddish brown, fairly stiff, but rather harsh and liable to splinter ; it holds nails well. A large part of the production is used locally for frames of buildings, joists, rafters, boxes, crates, concrete "forms," sleepers and poles, and for other purposes where a first-class wood is not essential.

AUSTRALIA.

The principal commercial woods which have been exported from Australia include jarrah, karri, tuart and wandoo from Western Australia ; and ironbark, grey gum, tallow wood, blackbutt, spotted gum, blue gum, stringybark, ash and swamp gum, and turpentine mainly from New South Wales and Tasmania. Many of these woods are well known in this country and in other parts of the world (notably South Africa and India), where they have been used for piling, heavy construction work, railway sleepers and wood paving. Other timbers—*e.g.*, black bean, blackwood or fiddleback, rosewood, silky oak—are also highly valued for decorative purposes, though not so well known. It is claimed that the most distinguishing physical property of Australian hardwoods is their durability under the most adverse natural and artificial conditions.

EUCALYPTUS WOODS.

JARRAH is restricted to the south-western section of Western Australia, and in this country is probably the best-known timber of the Commonwealth. It varies from light brick-red to dark red, is straight grained (sometimes wavy), splits easily in the direction of the grain, is of medium hardness, and works easily and well ; it is occasionally figured. The wood, which is used extensively in Australia and elsewhere for bridge, wharfe and house construction, railway sleepers, telegraph poles, and in all branches of carriage and wagon work. It has been largely exported to India and South Africa as railway sleepers, and in this country is well known for construction work, and as paving blocks, though for the latter purpose it is not so satisfactory under present conditions as Baltic timber. It is a fine cabinet and furniture wood, and is an admirable material for high-class joinery, such as window frames, doors, staircases, etc. It must be well seasoned, however, or joints are apt to gape. Weight, 51 lb. per cubic foot.

KARRI is also a Western Australian timber. It is often difficult to distinguish from jarrah, but it is considerably stronger than that wood, chiefly on account of the interlocked grain, which also renders it more difficult in working ; usually it is also lighter in colour. Karri is very suitable for bridge girders, beams, joists, etc., and has been largely

used in England for railway-carriage scantlings and telegraph-pole arms. It is fire resistant, and can be obtained in very large sizes. Weight, 58 lb. per cubic foot.

SYDNEY BLUE GUM, a native of New South Wales and Queensland, yields a hard red timber of medium weight (46 lb. per cubic foot) which should be more widely known in this country. It is straight grained, open, easy to work and durable, and gum veins are rare. It is used more particularly in coach and wheelwrights' work, and to a less extent in building construction, shipbuilding, paving blocks and sleepers.

STRINGYBARK, which occurs in all the eastern States and Tasmania, has been used in many parts of the world for sleepers, piling and heavy construction work. The wood is fissile, moderately hard and tough, and of a pale brown colour. The sapwood is liable to attack by borers and should be rejected. In Tasmania the timber is used extensively for joinery, cabinet work and internal fittings, for which purpose it is well suited. Weight, 46 lb. per cubic foot.

"ASHES."—The timbers furnished by this group resemble in many respects those of the genus *Fraxinus* (ash). Several valuable timbers are concerned, of which the best known is the mountain ash or Tasmanian oak, occurring in New South Wales and Tasmania. In its strength, resilience and bending properties the wood is very similar to the English ash, for which it forms an excellent substitute. In New South Wales this timber is much valued. In Tasmania it is largely used for furniture, office fittings and decorative work, and should be of interest to motor-body builders. Weight, 41 lb. per cubic foot.

OTHER HARDWOODS.

BLACKWOOD, obtainable from all the eastern States, is a decorative wood reddish-brown to dark brown in colour, with golden brown bands, and often a curly figure and mottling; the "fiddle back" variety has striking parallel dark stripes. It finishes well with a satiny sheen and takes a good polish, and is a magnificent timber for cabinet work. It is extensively used locally for internal fittings of railway carriages, shops and offices for furniture and similar purposes, and is well known in this country. Weight, 47 lb. per cubic foot.

RASPBERRY JAM WOOD, a very hard, rich crimson or purplish wood, with an odour of raspberries. It has a close smooth grain, and is excellent for turning and ornamental work, for which purpose it should be more widely known. It has been used locally for posts and other outside work on account of its durability, but it is too valuable for such a purpose. Weight, 62 lb. per cubic foot.

BLACK BEAN, occurring in New South Wales and southern Queensland, is another fine cabinet timber of moderate hardness. It is of various shades of brown, with dark stripes and mottling, is straight-grained, planes easily with a smooth surface and polishes well, but requires careful seasoning. Employed locally in all forms of cabinet and decorative work, doors, etc. Weight, 47 lb. per cubic foot.

SILKY OAK.—Five woods are stated to be marked in Sydney as "silky oak." Important varieties are derived from *Orites excelsa*, R. Br., and *Grevillea robusta*, A. Cunn., the timbers of which are similar. Both timbers are strong, durable and light-coloured, with a grain and handsome flecked figuring ("slash") resembling oak. They are suitable for office and shop fittings and for general joinery work.

CONIFEROUS WOODS.

Australia possesses few if any coniferous softwoods available in sufficient quantities to warrant any considerable export trade after supplying local needs. A number of indigenous "pine" timbers, however, are utilised in the Commonwealth, the following being the more important:—

HUON PINE, restricted to Tasmania, yields probably the finest soft-wood on the Australian market. It is pale yellow, fairly close and straight-grained timber with little figure. It has excellent working properties, and is used locally for every description of joinery and cabinet work. Weight, 33 lb. per cubic foot.

KING WILLIAM PINE, another Tasmanian timber, produces a soft, pale-pinkish timber, somewhat resembling Californian red-wood in appearance and properties. It is specially suitable for mouldings, skirtings and similar forms of joinery where strength is not essential. Weight, 21-24 lb. per cubic foot.

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BRITISH NORTH BORNEO.

There are large areas of virgin forest in British North Borneo, and recently the exploitation of these forests has been developed on modern lines.

The woods that are suitable for building are :—

RED SERIAH (*Shorea Spp.*).—This can be obtained up to 80 feet long and 5 feet diameter. It varies from pale pink or yellow to dark red, possesses a more or less cedar-like odour, and is easily worked. Weight, 25 to 40 lb. a cubic foot.

WHITE SERIAH is useful for light construction work. The weight is 35 to 40 lb. a cubic foot.

KRUIN.—Can be obtained in clear lengths up to 80 feet and diameter up to 4 feet. It is a strong and stiff wood, and will probably become the most important constructural wood of the country. Weight, 40 to 50 lb. a cubic foot.

SELANGAN BATU is another excellent wood for all constructural purposes. Weight, 52 to 65 lb. a cubic foot.

MIRABAU is a very hard and heavy, coarse-grained, dark yellowish-brown wood. Weight, 48 to 75 lb. a cubic foot. It is used for all kinds of high grade construction work on land.

KAPOR, or Borneo camphor wood, is good for constructural work, but it is said to be subject to dry rot, and if the tree has not been tapped for camphor it is useless.

All these timbers are liable to decay if in contact with the ground, but if properly protected they are very strong and durable. In the trade these timbers are known as cedar and teak ; this is very confusing, as they have no relation to either of these woods. The following are the equivalent trade names :—

Red Seriah	Red Cedar.
White Seriah	White Cedar.
Salangan Batu	No. 2 Borneo Teak.
Selangan Kacha	Prime Avera.
Mirabau	No. 1 Borneo Teak.
Kapor (camphor)	Burma Teak.
Kruin	Borneo Teak.
Oba Sula	Mahogany.

INDIA.

Apart from teak, overseas timber exports from India have been relatively small. The greater part

of the out-turn of timber is used locally and hitherto has been supplemented by large imports, of which a considerable proportion (chiefly coniferous soft-woods) is derived from Europe. It seems probable, however, that with the improved means of extraction and transport and satisfactory seasoning and treatment of the woods produced, the greater part of the needs of the country could be supplied from local forests (notably those of Burma), and leave available a surplus of valuable "jungle-woods" (*i.e.*, timber other than teak) well suited to the requirements of overseas markets. This question is engaging attention, and it is interesting to note the statement that fully 85 per cent. of the timber purchased by the Indian Munitions Board during the War for military purposes was the produce of the country. Hitherto, Indian timbers have remained little known outside India. In this country, in addition to teak, East Indian rosewood or blackwood, Andaman padauk, Eng, and Moulmein cedar are the best known ; while less familiar timbers are East Indian walnut, gurjun, pyinma, Burma padauk, and thatka or Moulmein mahogany. In America, teak, Andaman padauk and rosewood are well known, and East India walnut, also known as koko or kokko, black chuglam, white chuglam and Andaman marble-wood have also been imported. There would appear to be little doubt, however, that, provided the woods can be exported in fair quantities and at a reasonable price, the intrinsic merits of a considerable number of Indian woods would secure for them a valuable market in this country. Mr. A. Howard has recently introduced several of these and other interesting woods into the country.

TEAK.—This wood is too well known to need detailed description.

ENG or IN.—This valuable Burmese wood, together with the next three species described—*viz.*, gurjun, thingan and sal, belongs to Dipterocarpaceæ—one of the most important of timber-yielding trees in the East. The wood is closely allied to Siamese yang, and has been known in this country for many years, and used to a considerable extent for cheap furniture. Unfortunately, it has frequently been marketed as Eng "teak," causing disappointment to users of true teak, from which Eng is quite different. The heartwood is red to red-brown, with a strong aromatic smell when first cut. The wood is durable, hard and straight-grained, with a

firm, close texture which renders it very suitable for flooring. It is excellent for interior decorative work (panelling, etc.), and good results have been obtained when using it for heavy indoor constructional work. The timber, however, must be well seasoned, and is not recommended for outdoor work. Nails cause the production of a black stain when the wood is exposed to the wet, as in the case of oak. In India Eng is largely used for building purposes, boats, carts and furniture. Large supplies of the wood are available. Weight, 54 lb. per cubic foot.

GURJUN.—This is an important timber of Burma, and has been exported in considerable quantity to Calcutta from the Andamans, where large supplies are available; it is also known in this market. The wood is pale, reddish-brown, moderately hard, and oily. It is used locally for planking and packing cases, and experiments are being carried out in India as to the suitability of the wood for railway sleepers after antiseptic treatment. It is one of the best woods for parquet flooring, and can be most successfully employed for panelling. Weight (average), 50 lb. per cubic foot.

SAL.—This is one of the most important Indian timbers, and on account of its strength and durability is in great demand locally for railway sleepers, rolling stock, building purposes, etc., but on account of the local demand there is little likelihood of supplies being available for export in commercial quantities in the near future.

ANDAMAN PADAUK.—This beautiful timber, also known as Andaman redwood, deserves to be more widely used in this country, where its fine qualities are by no means fully recognised. It is restricted to the Andamans. The outstanding characteristic is the striking colour, which varies from deep crimson and brilliant red to brown, sometimes streaked with dark brown or black. The best coloured logs constitute only a small portion of those cut (about 5 per cent.), but it is estimated that approximately 70 per cent. of the logs yield redwood of various shades fit for export; the remaining 30 per cent. consist of "off-coloured" timber, which is fully equal to the best logs except in colour. The wood is very strong and durable, with a fine hard, smooth texture. It works well, does not warp or split, and takes a remarkably fine polish, which well repays the labour spent upon it. When worked in delicate mouldings, however, the finer members are inclined to chip.

BLACKWOOD.—This valuable timber, also known in this country as East India or Bombay rosewood, is a handsome, dark purplish wood with black streaks. It is very hard and durable, somewhat difficult to work, but takes a fine smooth polish. In India blackwood is extensively used for furniture, cabinet work, panelling, carving, joinery, carts, and for ordnance purposes; as well as for tool handles, brush backs, musical instruments, turnery, etc. The wood is exported to Europe and America for furniture and cabinet making, but in this country its use is now practically confined to the pianoforte trade. It deserves much wider application. Weight, 50 lb. per cubic foot.

MOULMEIN CEDAR.—This timber, also known as toon, red cedar and thitkado (Burma), is exported to Europe from Burma, and is well known in this country, being familiar as one of the woods used for making cigar boxes. It is also obtainable from other parts of the Empire—*e.g.*, Australia. The soft, fragrant wood is of a rose to dull red colour, and resembles an open-grained mahogany in texture and general characteristics. It works to a smooth shiny finish, and takes a fine polish, but requires considerable previous filling. The timber is durable under cover, does not split or warp, but is apt to be affected by large variations of temperature and moisture. The wood is in great demand in this country, and fine logs frequently obtain high prices. It is a valuable wood for furniture, cabinet work, panelling and cigar boxes, and in India additional uses are for boats, carving, oil casks, etc. Weight, 35 lb. per cubic foot, but variable.

PYINMA.—The chief timber of Assam, Eastern Bengal and Chittagong, and one of the most important timbers of Burma, where it is available in fair quantity. It is lightish reddish grey to olive-brown in colour, hard, durable, and with a straight grain. It works easily, gives a good surface and takes a fine polish. The wood is used in India for many purposes where strength and durability, combined with lightness, are required. It has been imported occasionally into this country, and has been recommended for carriage building, furniture and panelling, for which it would appear very suitable. Weight, 40 to 45 lb. per cubic foot (Gamble).

WEST AFRICA.

Practically the whole of the timber hitherto exported from British West Africa has been sold as

"mahogany," though certain other woods—e.g., iroko or West African teak, African walnut, African padauk—are more or less familiar to a section of the timber trade, though the majority of these woods remain practically unknown to timber users in this country. It is interesting to note that before the war West African timbers were far more widely used and appreciated in Germany than in the United Kingdom. At the present time, however, there are indications that the merits of selected West African woods other than "mahoganies" are receiving recognition in this country, and it is probable that, under favourable conditions as to freight, felling dues and forest transport, these timbers will find a regular market in this country for a variety of useful purposes.

MAHOGANIES.—The "mahoganies" derived from West Africa comprise several distinct botanical species of woods, which in appearance and practical qualities resemble the true mahogany of the West Indies sufficiently closely to be accepted and classified by the trade as mahogany. The best of the West African mahoganies are very valuable woods, and hold a high position in the market on account of the large sizes and quantities in which they are available and the magnificent figure which often characterises them. The trade in West African mahogany has been built up chiefly during the last twenty-five or thirty years, and for some time past the greater part of the enormous consumption of mahogany in this country has been of West African origin.

"Lagos" mahogany closely resembles Honduras mahogany in colour and general qualities. Formerly it was the best of the African mahoganies marketed, and many finely figured logs were regularly obtainable. Supplies of excellent wood are still shipped, but the export from Lagos has diminished in recent years.

The "Benin" wood is of very fine quality, and is especially useful for panel work on account of the large size of the logs. It resembles Lagos mahogany but is of superior toughness.

"Sapele" mahogany is also obtainable in large sizes, and figured logs are common. Hitherto the wood has marketed chiefly to Germany, where the well marked stripy "roe" rendered it very popular for cabinet making. The wood, however, frequently possesses a strong cedar odour, which in this country has been held to be a disadvantage. A

more serious defect is the common occurrence of ring-shake in the logs, and the liability of the wood to warp. The former defect may possibly be overcome by special methods of felling, and it is known that the warping can be avoided by using carefully seasoned timber cut on the quarter. The Imperial Institute Committee are making investigations with regard to this tendency to ring-shakes.

AFRICAN TEAK.—This splendid hardwood, also known as Iroko and Odoum, is one of the most valuable timbers in West Africa. It is extensively used locally for all kinds of construction work (including general carpentry, joinery and furniture), and is regularly imported into this country in small quantities from Nigeria and the Gold Coast, the best qualities coming from Benin (Nigeria). The wood is usually sold as "African teak" and also as "African oak"; the latter name, however, is incorrectly applied, the source of original African "oak" being *Oldfieldia africana*. In spite of its trade name, African teak is not related to true teak, and bears little resemblance to that wood in appearance and general features, the absence of the characteristic oiliness of teak being a notable point of difference. The wood varies from pale yellow-brown to dark brown, has a good appearance, and is strong, moderately hard, and very durable. When well seasoned it does not warp. It saws and planes well, but being somewhat cross-grained requires care in finishing, and takes nails indifferently. The grain is often somewhat open, but is handsome when polished. The wood is well adapted for all purposes where a strong, durable wood of good appearance is required, and should receive far more attention in this country. It is excellently suited for doors (inside and out), window sashes, sills, treads and staircases, and probably possesses a considerable degree of fire resistance. The wood should be most useful for interior finishing, joinery, cabinet work, laboratory benches and fittings, wagon building and wheel felloes.

BRITISH GUIANA.

CRABWOOD or BRITISH GUIANA MAHOGANY.—This valuable timber, which belongs to the mahogany family, deserves far wider attention in this country, being suitable for many purposes where medium qualities of mahogany are employed. Two varieties are stated to occur—viz., "red" (or highland) crabwood, and "white" (or lowland)

crabwood, but so far it has not been possible to detect any botanical distinction between the trees concerned. The former is darker in colour and of closer texture than the "white" variety. Red crabwood is a tough, moderately soft, lustrous wood, closely resembling mahogany and certain grades of cedar in colour and appearance. It has a moderately coarse, open grain, saws easily, takes nails fairly well, and is capable of a high polish. In planing, care is necessary, as the wood is sometimes apt to "pick up." The wood is largely used for building purposes in British Guiana, and is the favourite furniture wood of the colony. It is not unknown in this country, and has been exported in considerable quantities to the United States. It is a very useful cabinet and furniture wood, and is well adapted as a substitute for medium quality mahogany; it has been used with much success in the British Guiana Court at the Imperial Institute for show cases and ornamental construction work. Weight, $38\frac{1}{2}$ to $46\frac{1}{2}$ lb. per cubic foot (quoted by Stone and Freeman).

RED CEDAR.—This is the well known "West Indian cedar," commercial supplies of which are derived from several parts of the West Indies. It should not be confused with white cedar or Warakuki. British Guiana red cedar has a fairly coarse grain, but works well and takes a good finish. The uses of this timber are too well known to need description.

MORA.—This timber deserves to be better known in this country. It is dark or reddish brown, often streaked with whitish or dark brown lines, and possesses a lustrous surface, which, however, is somewhat marred by a grey resinous deposit. The heartwood is one of the eight first-class shipbuilding timbers at Lloyd's, and is obtainable in logs 18 to 35 feet in length, squaring 12 to 20 inches. Two varieties are distinguished—viz., red and white mora—but it is not clear that the timbers differ in any important respects. Mora is a hard, heavy, strong, very tough and durable timber, fissile, hard to saw, planing well and smoothly, but nailing badly; it takes a fine polish. The wood is abundant in the colony, and is strongly recommended for shipbuilding, heavy construction work, and for railway sleepers; it is also worth trial as paving blocks. Weight, 57 to $68\frac{1}{2}$ lb. per cubic foot.

WALLABA.—One of the most useful and abundant timbers of the colony. Several varieties are recognised, the chief being "soft" wallaba and itura wallaba. The heartwood of both these species is much used locally for posts and fencing on account of its great durability, and is also extensively employed for barrel and vat staves, shingles and firewood. "Soft" wallaba (so-called), however, is probably the most useful and abundant of all the varieties. It is a striking dark red wood, hard and heavy, and with a coarse but more or less even grain. The abundant resin causes a stickiness which is an unfortunate feature for many purposes, as is also the unpleasant smell, which, however, is not permanent. The wood splits easily, straight, and fairly cleanly, is moderately easy to saw, takes nails badly, and planes fairly well; it is troublesome to polish on account of "smearing." The wood has been suggested as suitable for paving blocks. Weight, 62 lb. per cubic foot (quoted by Stone and Freeman).

BRITISH HONDURAS.

British Honduras is one of the most important timber producing countries of the Empire. A considerable number of valuable woods are found in the country, but the most important are the famous British Honduras mahogany, cedar and rosewood. Pine also occurs in considerable quantities and merits further attention.

BRITISH HONDURAS MAHOGANY.—This timber, which forms one of the best grades of mahogany in the market, is too well known to need detailed description. Formerly the wood was ascribed to the same botanical source as "Spanish" or West Indian mahogany, which was at one time common in several of the British West Indian islands. The Honduras timber is now generally recognised to be derived from a distinct but closely related species—viz., *Swietenia macrophylla*. The best qualities of Honduras mahogany are said to come from the limestone soils to the north of Belize. Those from the south of the colony, and especially from the Mosquito Coast, are somewhat inferior in density and grain.

HONDURAS ROSEWOOD.—This timber is closely related botanically to East Indian rosewood, and is much valued for furniture and cabinet work and for turnery, inlaying, etc. It is a dark, reddish or nut-

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brown wood, with an attractive grain and often streaked with narrow black lines. Weight, 68 to 77½ lb. per cubic foot.

PINE.—This pine is a characteristic feature of the "pine ridges" of the colony and occurs in considerable quantity. The wood is distinguished locally as "white" and "yellow" pine, though probably only one species of tree is concerned. It resembles pitch pine in appearance and weight, and is used on the colony to a small extent for building purposes, but it is said to be somewhat difficult to saw. The wood should prove very useful for railway sleepers if properly seasoned, and is well worth exploitation.

Appendix A

IMPERIAL INSTITUTE ADVISORY COMMITTEE ON TIMBERS.

The Imperial Institute Advisory Committee on Timbers, under the chairmanship of Mr. H. D. Searles-Wood, F.R.I.B.A., comprises members nominated by professional and trade bodies including the Royal Institute of British Architects, the Timber Trade Federation, the Institute of Builders, the National Federation of Furniture Manufacturers, the Carpenters' Company, the Institute of British Carriage and Automobile Manufacturers, and the Empire Development Parliamentary Committee. The Committee is also associated with the Empire Forestry Association, who have appointed representatives to serve on the Committee.

The main object of the Committee is to examine in turn those timbers of the different countries of the Empire which are available in commercial quantities at reasonable prices, with a view to bringing to the notice of the trade and of users of timber in this country new or little known Empire woods which possess technical qualities that render them valuable for constructional or decorative purposes. In this work the Committee has been greatly assisted by the unique collection of Empire woods arranged in the Public Exhibition Galleries of the Imperial Institute; while such tests as are considered necessary by the Committee for determining the mechanical strength and working qualities of the timbers examined are carried out in the Timber Testing Laboratory of the Imperial Institute which is fully equipped for the purpose. The Committee also act in an advisory capacity with regard to the work on timber carried out at the Imperial Institute.

The Committee have now examined a large number of woods from several parts of the Empire. A considerable proportion of these woods have been found to possess qualities which render them well suited for various uses in this country, often as substitutes for better-known foreign woods. These woods have been made the subject of official reports of the Committee, several of which have already been published in the *Bulletin of the Imperial Institute*, while others are in course of publication.

The more important of these reports deal with woods from British Columbia, Eastern Canada, New Zealand, Nigeria, India and British North Borneo. As a result of the report on British Columbia timbers, B.C. Douglas fir, B.C. spruce and B.C. western hemlock have been included in the official specifications of H.M. Office of Works.

The following is a list of the more important woods examined by the Committee:—

BRITISH COLUMBIAN TIMBERS.

Douglas Fir	Western Yellow Pine
Silver Spruce	Western Larch
Western Hemlock	Western Red Cedar
Western White Pine	

EASTERN CANADIAN TIMBERS.

White Pine	Balsam Fir
Red Pine	Jack Pine
Spruces	Tamarack
Eastern Hemlock	Beech
Eastern Larch	Birch
Eastern Cedar	

INDIAN AND BURMESE TIMBERS.

Burma Padauk	Rosewood
Andaman Padauk	Sissoo
Sal	Thitya
Taman (Pyinma)	Ingyin
Haldu	Yamano
Eug	Taukkyan (Sain)
Pyinkado	Pine Kanazo or Sundri
Thingan	Kanyin
Gurjun	Thitkado (Moulmein Cedar)

BRITISH GUIANA TIMBERS.

British Guiana Crabwood	Red Cedar
Mora	White Cedar
Wallaba	Determa
Silverbally	Dalli
Greenheart	Puti Foti

BRITISH NORTH BORNEO TIMBERS.

Red Serlah	Kapor
White Serlah	Selangau Batu
Kruin	Selangau Kacha

NIGERIAN TIMBERS.

Afara	Ogugu
Agba	Obobonufwa
Aligna	Obobonekhui
Okwele	Anamothila
Ekhini	Ainyeran
Sapele Mahogany	Ekki
Opepe	Agbolu
Arere	Abura
Enido	Mangrove
Ebo	

NEW ZEALAND TIMBERS.

Kauri Pine	Black Beech
Southland Beech	Rimu
Red Beech	

CEYLON TIMBERS.

Boxwood	Honduras Mahogany grown in Ceylon
Wira	
Etteriya	

BRITISH HONDURAS TIMBERS.

Pine	Salmwood
Santa Maria	Black Poisonwood
Banak	

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Appendix B

CONJOINT BOARD OF SCIENTIFIC SOCIETIES

TIMBER COMMITTEE

STANDARDISED NAMES FOR TIMBERS

Suggested Standard Name	Scientific Name	Country of Origin	Names occasionally used which it is proposed shall be abandoned for the purpose of standardising nomenclature
PINE.			
Scots Pine	<i>Pinus sylvestris</i>	Nearly the whole of Europe, including Scotland, Northern and Western Asia	Baltic Redwood, Red Deal, Yellow Deal, Scotch Fir
Siberian Pine	„ <i>Combra</i>	Alps, Carpathians, N.E. Russia, W. Siberia	Combran Pine, Yellow Pine, Swiss Pine, Alpine Pine
White Pine	„ <i>Strobus</i>	Canada, Northern and Eastern U.S.A.	Weymouth Pine, Yellow Pine, Soft Pine
Western White Pine	„ <i>monticola</i>	British Columbia and Western U.S.A., from Washington and Montana to Central California	Silver Pine, White Pine
Canadian Red Pine ..	„ <i>resinosa</i>	Canada and Northern U.S.A.	Hard Pine, Red Pine
Bull Pine	„ <i>ponderosa</i>	Western North America, from British Columbia and Lower California, and N. Mexico	Yellow Pine, Big Pine, Pitch Pine, Red Pine, Heavy Pine
Lodgepole Pine	„ <i>murrayana</i>	—	Tamarack, Prickly Pine, Spruce Pine, Murray Pine
Loblolly Pine	„ <i>taeda</i>	South-Eastern U.S.A.	White Pine, Black Pine, etc.
Hard Pine	„ <i>rigida</i>	Eastern N. America	Pitch Pine
Short-leaf Pine	„ <i>echinata</i>	Eastern U.S.A.	Carolina Pine
Pitch Pine	„ <i>mitis</i>	—	Pitch Pine, Short-leaf Yellow Pine
Manchurian Pine	„ <i>Palustris</i>	South-Eastern U.S.A.	Yellow Pine, Long-leaf Yellow Pine
	„ <i>koraensis</i>	Eastern Siberia, Manchuria, Korea, Japan	Siberian Pine, Korean Pine
SPRUCE.			
European Spruce	<i>Picea excelsa</i>	Europe	Baltic White Wood, Deal, White Deal Spruce Fir, White Fir, Swiss Pine, Violin Wood
White Spruce	„ <i>alba</i>	Eastern Canada and North-Eastern U.S.A.	American White Spruce, Canadian White Spruce, Quebec Spruce, Campbellton Spruce
Black Spruce	„ <i>nigra</i>	North America from Alaska to Labrador and southwards from the North-Eastern U.S.A. to S. Virginia	American, Canadian Spruce, New Brunswick Spruce, St. John's Spruce
Sitka Spruce	„ <i>sitchensis</i>	Western N. America from Alaska to California	Mensica Spruce, Silver Spruce, Tideland or Western Spruce
Japanese Spruce	„ <i>ajanensis</i>	Japan	—
Siberian Spruce	„ or other if approved <i>Picea obovata</i>	Siberia	—
FIR.			
Silver Fir, Europe	<i>Abies pectinata</i> D.C. ..	Mountains of Central and Southern Europe	Swiss Pine
Balsam Fir, U.S.A., Canada	„ <i>balsamea</i> , Hill	North America from Labrador to the Northern U.S.A. and Virginia	Silver Pine, Hudson Bay Pine, Canada Balsam, Balm of Gilead, U.S.A.
Oregon White Fir, Noble, Oregon, Wash.	„ <i>Nobilis</i> , Lindl. ..	Western U.S.A. from Washington to Northern California	Red Fir, Noble Fir, Larch, U.S.A.
Californian White Fir	„ <i>concolor</i> , L. & C.	Western and South-Western U.S.A. and Northern Mexico	White Fir, Balsam Fir, U.S.A.
Japanese Fir, N. Japan, N.E. Siberia	„ <i>sachalinensis</i> , Wats.	Saghalien, Kurile Is., N. Japan	—
Douglas Fir	<i>Pseudotsuga Douglasii</i> ..	Western N. America and N. Mexico	Oregon Pine, Douglas Pine, Red Fir, Yellow Fir, U.S.A., Columbian Spruce, U.S.A.

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Suggested Standard Name	Scientific Name	Country of Origin	Names occasionally used which it is proposed shall be abandoned for the purpose of standardising nomenclature
LARCH.			
Europe Larch ..	<i>Larix europæa</i> , D.C. ..	Mts. of Central and Southern Europe	—
Northern Larch, W. Russia	„ <i>siberica</i> , var. of Ledeb.	N.E. Russia and Siberia ..	Archangel or White Sea Larch
Western Larch, Rocky Mts.	„ <i>occidentalis</i> Nutt.	British Columbia and North-Western U.S.A.	Not known over here and therefore no popular description
HEMLOCK.			
Canada	<i>Tsuga canadensis</i> , Carr.	Canada and Eastern U.S.A. ..	Hemlock Spruce
Western	„ <i>albertiana</i> ..	Western N. America from Alaska to California	The timber of this tree is usually considered to be superior to that of <i>T. canadensis</i>
CYPRESS.			
Louisiana Cypress ..	<i>Taxodium distichum</i> , Rich.	Southern U.S.A.	Deciduous or Louisiana Cypress (both names are in use and correct)
White Cypress, E. U.S.A.	<i>Chamaecyparis thyoides</i> L.	Eastern U.S.A.	White Cedar, Swamp Cedar, U.S.A.
Yellow, Brit. Col., Alaska	<i>Chamaecyparis nastkensis</i> Lamb.	Western N. America from Alaska to Washington and Oregon	Yellow Cedar, Sitka Cypress, Alaska Cypress
Port Orford Cedar, Oregon	<i>Chamaecyparis lawsoniana</i> , A. Barr.	S.W. Oregon to Northern California	Oregon or White Cedar
ARBORVITÆ.			
Giant, W. U.S.A. ..	<i>Thuyn plicata</i> , Den. ..	Western U.S.A.	Red Cedar, Western Cedar
SEQUOIA.			
U.S. and England ..	<i>Sequoia sempervirens</i> , Erdl.	California	Californian Redwood or Sequoia
REDWOOD	<i>Sequoia gigantea</i> , Ton...	California	—
WALNUT.			
European Walnut ..	<i>Juglans regia</i> , L. ..	South-Eastern Europe to the Himalaya; North China and Japan	French, Italian, Circassian Walnut
Black Walnut, U.S.A.	„ <i>nigra</i> , L. ..	Southern Canada and Eastern U.S.A.	American Black Walnut
Japanese Walnut, Kurimi	„ <i>sieboldiana</i> Maxim	Japan	White or Grey Walnut
BUTTERNUT, U.S.A. ..	„ <i>cinerea</i> , Linn. ..	Canada and Eastern U.S.A. ..	—
LIME.			
European Lime ..	<i>Tilia vulgaris</i> , Mayne ..	Europe	—
American Lime ..	„ <i>Americana</i> , L. ..	Eastern U.S.A.	Basswood, U.S.A.
OAK.			
British Oak	<i>Quercus pedunculata</i> ..	Europe, including the British Isles; Caucasus, Asia Minor	Both trees common and timber of both trees is mixed indiscriminately in all these countries.
	„ <i>sesi-siliflora</i> Salisb.		
French Oak	„ ..	„ ..	—
Austrian Oak ..	„ ..	„ ..	—
Riga Oak	„ ..	„ ..	—
American White Oak	„ <i>alba</i> , L. ..	Eastern North America ..	Mixed in this as exported are several distinct species of variable quality
American Red Oak ..	„ <i>rubra</i> , L. ..	—	The same remarks apply
Chestnut Oak, U.S.A.	„ <i>prinus</i> , L. ..	—	Rock Oak, New York, sold as White Oak. Called Chestnut in England, but passed off sometimes as Oak
Yellow Oak, S. U.S.A.	„ <i>velutina</i> Lamb	—	Sold as Red Oak.
Pin Oak, U.S.A. ..	„ <i>palustris</i> Muench	—	Sold as Red Oak; often described as Baltimore or Virginian Oak, often sold as Wagon Oak or Sill Oak

N.B.—None of the woods known as cedar are true cedars, and no true cedar wood is in general use in trade in this country. Lebanon cedar, large quantities of Algerian cedar, *Cedras atlantis*, were shipped to London for sale by the French Government recently, and further supplies are likely in future.—N.E.D. Algerian cedar and Deodar from Himalayas are the only trees which are the true cedar.

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Suggested Standard Name	Scientific Name	Country of Origin	Names occasionally used which it is proposed shall be abandoned for the purpose of standardising nomenclature
WILLOW. Goat or Withy ..	<i>Salix alba</i> , L. " <i>cuprea</i> , L.	Eastern Counties of England ..	There are a great many species and varieties of willow, of which the one known as <i>bat willow</i> is the most valuable for that purpose and the only one I know of which is known generally in the trade
ELM. English Elm ..	<i>Ulmus campestris</i> , L. ..	Southern England and possibly Spain	Often confused in trade as there are many varieties of which the red-wooded elm of the Thames and Severn valleys is best, and many varieties known under local names are not distinguished in the trade
Wych Elm	" <i>montana</i> , With.	Europe, including the British Isles; Caucasus, Asia Minor, North-East Asia	
Rock Elm, U.S.A. ..	" <i>racemosa</i> , Thomas	—	
White American Elm	" <i>americana</i> , L. ..	—	Soft Elm, U.S.A., here known as Soft Elm
BIRCH. American Birch ..	<i>Betula</i> spp.	Eastern North America	Various species are included in American Birch in commerce.
POPLAR. White, Europe ..	<i>Populus alba</i> , L. ..	Europe, North Africa, North and West Asia	Usually confused in England, where the grey alone is native and considered the best poplar wood, often called aspen or asp, which is a much smaller tree and inferior timber
Grey Poplar, England	" <i>canescens</i> ..	Western Europe, including the British Isles	Tree most used for poplar timber in England
Black Poplar, England	" <i>nigra</i> , L. ..	Europe, including the British Isles	French Poplar mainly, but there are many varieties. Unknown in the trade, but a very good timber of great size
Black Italian Poplar, England	" <i>scrota</i> ..	Morocco	
Black Cottonwood Poplar, Brit. Columbia	" <i>trichocarpa</i> , T. & C.	Western North America ..	—
American Balsam ..	" <i>balsamifera</i> , L.	—	Balm of Gilead
Cottonwood Poplar ..	" <i>deltoidea</i> , Marsh.	—	—
TULIP TREE, U.S.A.	<i>Liriodendron tulipifera</i> , L.	Eastern North America	Yellow Poplar, U.S.A. American White-wood, Canary Whitewood, Canary Wood, Canary Pine, England. Rose-wood, Scotland and England
ASH. European ..	<i>Fraxinus Excelsior</i> , L. ..	—	
American White ..	" <i>Americana</i> , L. ..	—	Several species, mostly inferior, are sold under the name of American Ash
MAHOGANY. Honduras	Some Mexican may have crept in	—	There are no fancy popular names of these. They are mostly known for what they are and so described
Nicaraguan		—	
Tabasco	—	—	—
Guatemala	—	—	—
West African ..	Admiralty getting most Nigerian	—	—
LIQUIDAMBER, U.S.A.	<i>Liquidambar styraciflua</i> , L.	—	Satin Walnut, Hazel Pine, Sapwood, in England only, Redgum in America; now largely used as plywood
HICKORY	<i>Hicoria ovata</i> Mill. ..	Eastern North America	Shagbark Hickory and Shellbark Hickory

A great many different species from Africa are distinguished in trade by their port of shipment.

Discussion

The PRESIDENT : We have heard a very interesting paper, and one which will add a great deal to our information when we come to read it.

We have interesting and important guests with us to-night, and I have great pleasure in calling upon Sir Joseph Cook, High Commissioner of the Commonwealth of Australia, to propose a vote of thanks.

The Right Hon. Sir JOSEPH COOK, G.C.M.G. (High Commissioner for the Commonwealth of Australia) : It is a great pleasure for me to be here this evening to listen to this very interesting paper. I have heard to-night a great many things about Australian timber that I did not know before. That may very well be, because I do not pretend to be a timber expert, or anything of the kind. But I noticed that the lecturer left out of account some of our valuable timbers in Australia. He has told you a great deal, for instance, about teaks of various kinds and in various places ; and I would like to remind you that we have some very remarkable teak on the Northern rivers of New South Wales. One of its characteristics is that no white ant will touch it. It is, I believe, about the only timber known that the white ant will not eat in any circumstances. We have, also, on the North rivers in New South Wales a very large quantity of cedar. Perhaps it is all being cut down now ; I do not know. One of the troubles of new countries is that valuable timbers are burnt off in the process of clearing the land for the settler. Time was when there were very large forests of red cedar on the Northern rivers.

A good deal depends, I suppose, on what you have in mind when you speak of the relative values of timbers. I have, for instance, been very much surprised to-night to hear that the karri timber of Western Australia is superior to jarrah. It may be for building purposes, but not for others ; and here I speak from experience. I remember that when we were building the trans-Australian Line, which, as you know, is 1,000 miles from its commencement to Kalgoorlie, we had a controversy as to the kind of sleepers which were to be employed. One of our Ministers had decided that karri should be used. In order to make this karri suitable for railway sleepers it was necessary to Powellise it—I think that is the name of the process. We had a tremendous controversy in our Australian Parliament as to the wisdom of sleepers the railway line with so many millions of karri sleepers. It was said that jarrah was very much better for the purpose without Powellising or treating it any way. In addition to being Prime Minister at the time, I was Minister of Home Affairs, and charged with the construction of this railway. The selection of the timber was a compromise, and both jarrah cedars and karri were used ; and I am bound to say that the karri sleepers have turned out

much better than some of us expected. I rode over the line a little while ago, and was shown the position of the Powellised karri sleepers ; and although they had been down seven years, they appeared to be quite intact and thoroughly sound. The Powellising process had evidently prevented the white ant from getting into the timber. To-night I hear that karri is a superior timber to jarrah. I am not prepared to say it is not ; all I know is, that at the time the critics in the House insisted that jarrah was superior to karri.

We have heard to-night of a great many other woods, and it struck me while the lecturer was reading his paper that it may well be that you do not know all the woods in the Empire, simply because you have not had samples of them brought over here and have not used them. For instance, what about Queensland maple ? There is no finer looking furniture in the world than that made of our Queensland maple. And then there is the blackwood. I am glad to hear its qualities extolled to-night. If you have ever seen a suite of blackwood furniture you will, I think, agree there is nothing more beautiful. The trouble is that when you buy furniture in London you have only mahogany and rosewood and one or two other timbers to choose from. You go in for everything here that is solid and substantial, rich in colour and all that kind of thing. I think it is very much like your character, solid and enduring.

We have been taken all over the world to-night, and have heard all about the different timbers. I hope sincerely that you will keep in mind Australian timbers. If we have only been sending you our hard woods to pave your streets with it is not because we have not other kinds. The country is such a distance away that I suppose the freights are an obstacle. We have splendid woods, and I hope you will not forget to use them sometimes. This is a great Empire of ours. We have heard to-night that it is full of timber. It is full of nearly everything else that the Empire wants for its sustenance and its continuity. If ever there was an Empire in the world which could afford to be self-contained, it is this mighty confraternity of nations of which this Empire has been built up. Mr. Searles-Wood has shown you to-night that every conceivable kind of timber grows throughout this wide, broad, far-flung domain of ours. Therefore I shall hope to see a policy which is framed not upon hard economic considerations only, though not neglecting that aspect of it, but upon considerations which have to do with the solidarity, permanence and mutual helpfulness of every part of our Empire in relation to every other part. These lectures upon our Empire resources minister to the feeling that the trading of the Empire, as well as other things, should be kept as much as possible within the confines of the Empire.

The point I want to make before I sit down is with regard to afforestation. I remember that when the war was over and the question of war debts came to be considered, one of the oldest, wisest and most experienced men on timber in this Empire came to me with this proposition. He said, "If you want to pay the debts of the Empire in a way that will not hurt anybody, carry out a scientific system of afforestation throughout the Empire." He said, "In Australia you can pay your war debt, which amounts to nearly 400 millions sterling"—nearly as heavy as yours, certainly proportionately as heavy—"by a system of afforestation. Cultivate your soft pine woods"—those that we now send you in the shape of butter-boxes, fruit-boxes, etc.—"then," he said, "in thirty years you will have paid off your National Debt." There is plenty of room in this Empire to grow enough timber to pay off the debts of the Empire; and I believe it could be done.

I am glad to be here to-night, Mr. President, and to have the privilege of moving a vote of thanks to the lecturer, who has given us such a good glimpse of the possibilities of the Empire and its resources.

Professor WYNDHAM R. DUNSTAN, C.M.G., F.R.S. (Director of the Imperial Institute): It gives me great pleasure to second the vote of thanks.

Before I make any remarks on the subject of the paper, I should like to say that I am sure everybody in this room feels what a great pleasure it is to have amongst us this evening Sir Joseph Cook, who has only recently arrived, not to pay his first visit to this country, but perhaps his longest one. All have heard with pleasure the very broad, statesmanlike view which he has given us of our Empire. His presence here to-night, as well as the remarks he has made, seem to indicate that he is ready to put his shoulder to the wheel to help us in realising a great ideal.

I think Mr. Searles-Wood has done a great service in bringing to the notice of architects the fact that there are, in the various countries of the Empire, numerous woods which are suitable for building purposes. It is also to be added that there are, as Sir Joseph Cook said, woods of very great beauty which ought to be known to architects on account of their decorative possibilities. We have come to regard almost as a truism the saying that we ought to develop to the utmost extent the resources of the Empire in timber; but surprisingly little has been done. The lecturer has told you that, in two very important public buildings which are now approaching completion, the principal timber employed is not English or British, but has been obtained from abroad and this in the year 1922, after all the talk that we have heard about the importance of using materials derived from our own countries! This is a problem which in its detail is exceedingly complicated. There is a number of difficult factors concerned which require very careful study. Timbers which I think ought to be

in very large use are rarely used, or not at all. When we look into the facts we find that the amount of timber available is not definitely known; the cost of production has not been accurately ascertained, and in many instances transport facilities are very difficult. The result is that the merchant on this side is only prepared to offer quite a nominal price for a wood when he knows practically nothing as to the possibilities of getting regular supplies of it. Again, we have the difficult question of freight, which operates, I am sorry to say, against the use of a number of timbers which are perfectly suitable for building purposes. But when they have to be brought a great distance it is difficult for them to compete with timbers which are produced nearer home. The result of this is, that in a number of countries valuable timber is being put to quite unimportant uses, and in many cases is being burned as fuel.

The question is, what can be done? It is quite clear that the existing information requires to be brought together and carefully examined, so that the true facts can be ascertained. It is equally obvious that a great deal of new information is needed and will have to be procured. Mr. Searles-Wood is the Chairman of a Committee which we all hope will be able to do a great deal in this direction, because it has limited its field of work. The subject of timber for building, decorative and other purposes is a great one, even if you limit it to the timber which is grown within the Empire. This Committee has set to work to select a few of the most important timbers from the different countries, to find out definitely what supplies exist, at what cost they can be extracted, and for what purposes their properties render them particularly suitable. As the Committee consists of architects, builders, merchants and manufacturers, it ought to be in a strong position to do this work. It has, at the Imperial Institute, a very fine collection of the timbers of the Empire to start with; it has an expert staff, it has means of testing, and it has means of communication with overseas. It has already done much valuable work; it has been the means of bringing into further use several important timbers, and I have no doubt that, as it proceeds from country to country, it will do something to add to the somewhat meagre collection which you see on the table this evening.

There is one other subject to which Mr. Searles-Wood alluded—it is that of afforestation; he particularly drew attention to that in connection with the growth of our English timber. But afforestation is equally important to the countries overseas. We have to remember that economy and thrift are equally as important in connection with timber as in other matters, and that supplies, which look at the moment to be exceedingly abundant, disappear in time if they are constantly being drawn upon. Therefore they ought to be

properly conserved and looked after. The Committee over which Mr. Searles-Wood presides is working in co-operation with the newly formed Empire Afforestation Association, from whose work much is expected throughout the Empire.

I am rather tempted by the example of Sir Joseph Cook to say one word about another aspect of timber usage. It seems to me evident that we must learn to use timber only for constructional purposes and for decoration. At the present time it is widely used for quite inferior purposes, of which perhaps the most important is the manufacture of paper. Paper is responsible for the consumption of a very large amount of timber which, if it were allowed to grow to maturity, would be of enormous value for building and other constructional work. I am one of those who hope that in the future the consumption of timber will be limited, and that it will finally be altogether superseded by the use of other materials which are equally effective for the manufacture of paper and which, at any rate in this country, are not required for constructional purposes. I refer in this connection first of all to bamboo, which is very abundant in the tropics, and can be produced over and over again. A number of similar reeds and grasses are only now gradually coming into use, because manufacturers, even of paper, are conservative and do not like to employ wholly new materials. There is very good evidence that these other materials, especially bamboo, will in future play a very important part in the making of paper. If that occurs, there ought to be available very much more timber of the sort the architect and the builder want.

I would like to say with what pleasure I have been here to-night to listen to Mr. Searles-Wood's paper, and I wish to express to him my obligation for the great trouble he has taken to collect the large amount of data, which I am sure will be very valuable for reference in your JOURNAL.

Hon. Sir EDGAR WALTON (High Commissioner for the Union of South Africa): You have surprised me by calling upon me, Sir. I am afraid I cannot contribute much to the subject from my South African experience. I think that what has happened in most countries happened there, too. We commenced with deforestation, and then, after some generations of deforestation, we embarked upon a policy of afforestation. Many of our indigenous woods are highly valuable; we have not yet developed them to what we may call a commercial extent, that is, the extent which the lecturer has spoken about to-night, when it is possible to put on the market in the United Kingdom a regular supply on which timber merchants and others feel justified in spending capital. Then in South Africa we have our diamond mines, gold mines, and coal mines, which create a great demand for timber for the use of pit-props. One of the difficulties of our Forestry Department to-day is to

control the agents of these mining companies when they get to work on our forests. We are now adopting, I think, more and more largely, a system of using in the mines cement props instead of timber.

I fully endorse the remarks which have been made by speakers to-night as to the vast importance of this question, and I am very glad to find that your Institute is considering it from the Empire point of view; so that when one in your profession is called upon to select material for the construction of buildings, he will in the first instance, if possible, see if he can get it from within the British Empire before beginning to exploit other fields. This has been done in the past, no doubt, but not so much as it ought. I have not found, in different parts of the Empire, that there is always a keenness to say "We are going to have British goods and British manufactures, and that is a principle to which we will adhere." It is a principle, it seems to me, that we as British people ought to adopt in the present confused and unsettled state of world economics. We ought to stand by it and refuse to be led aside by tempting offers of other materials which will go to the benefit of other people.

I have very much pleasure in adding my thanks to those of other speakers to Mr. Searles-Wood for an extremely interesting and instructive paper.

Mr. H. O. WELLER (Director of Building Research, Department of Scientific and Industrial Research): We have had several papers read in London recently on the timbers of various parts of the Empire, but I think there has not before been anything so inclusive as this.

I would challenge one remark—that it is essential the timber resources of the United Kingdom should be increased. Is that really so important? If we get our timber from the Empire, I do not think it matters much what is grown in the United Kingdom, because the area is small and the quantity of any particular kind of timber which can be grown must also be small. There is the saying, "British oak for British ships"; but I think many of our old ships were built of teak from India.

With regard to various sections of the Empire, Canada sets a great example in a pamphlet on Douglas fir; it is a model for others to follow. When you look into the information given by other Governments, it is often hardly worth having; they do not tell much and particularly they omit to tell us how to differentiate one wood from another quickly in practice, in cases where you cannot tell by simply looking at an ordinary specimen. Points like that are practically never to be found in Government publications.

With reference to Australian timbers, in India we have used Australian timbers during the last twenty years, and I agree with Sir Joseph Cook in saying that jarrah is much better than karri. There again it is difficult to tell one from the other. I heard an old en-

gineer years ago giving some information on that point, which I have not seen set down. He said you can distinguish jarrah and karri by burning a chip; the ash from jarrah is black, that from karri is white. Jarrah is a useful timber for sleepers, for bridge-timbering and piles. In sea water karri is particularly bad for piles, because borers attack it.

I have had experience of many other Australian timbers. Blue gum is good. Black butt is a good timber for sleepers. I had under test on my track, twenty or thirty Australian timbers, all branded "True to name" by the various Australian Governments. We tested these for two or three years, and picked out some which were better than others; but when we gave orders for them we met a difficulty; we could not get those we specified, and had to take mixed hard woods. Incidentally, it is a great point in favour of Australian woods that you can get them branded "True to name" by Government Inspectors. I do not think that is so with any other Colonial timber. This is a point which should be remembered in buying Indian timbers. The native merchants are adepts at faking one timber to look like another, therefore it would be as well to insist on some kind of guarantee when buying, not only from India, but from the East generally. I was told by a big timber merchant in London that he had been taken in by Manchurian oak. He found some of it was ash.

We tried Manchurian oak in India just before the war; after trials we finally rejected that timber in India. After the war, I was astonished to see it being used in England. It is not nearly so good as Austrian oak. In the log it shakes and splits, and as a sleeper it breaks off short. It is not good for constructional timber; as an ornamental timber it may be a success, but I doubt it.

Deodar has been omitted from the list of Indian timbers. It is a true cedar, and it is one of the best timbers in North-West India. It has an essential oil in it, and white ants do not touch it. Regarding teak, we have been used to specifying "Moulmein," but I believe that the best teak now comes from Java. That is not in the British Empire; if you want to use a British Empire wood which is as good as teak, use padauk. The lecturer truly says that sal is a most important Indian timber, but it is a constructional timber only; you cannot get a good surface on it owing to its twisted grain. Moreover, there is such a demand for it in India that I don't think you could bring it to England at a reasonable price. We have had to go to Australia, owing to the shortage of sal, in order to get sleepers.

Padauk is, it is said, restricted to the Andamans. But there is a Burmese padauk which is almost indistinguishable from the other. It is a very fine timber, and can be obtained in any reasonable length and width of plank.

With regard to rosewood for ordnance purposes, I

think the lecturer is "pulling our leg." What happened in India in regard to rosewood used for ordnance purposes was, I believe, that someone in South India persuaded a loyal rajah to let the Government of India have a few hundred tons of rosewood at a cheap price to make into artillery wheels. It was found very unsuitable for that purpose.

With regard to substitutes for timber in the manufacture of paper, bamboo has been tried, but bamboo is not cheap, and there are other materials available. For instance, we recently had a sample of waste jute-stick from Bengal made up successfully into a pure white cellulose, suitable for paper-making.

In conclusion, I compliment Mr. Searles-Wood on his very interesting paper.

Mr. W. E. VERNON CROMPTON [F.]: I would like to associate myself with the vote of thanks, for two reasons. Speaking as an architect, I think Mr. Searles-Wood has given us some valuable information, which will be published in our JOURNAL for reference for practically all time. Secondly, for the last five years I have been associated with Mr. Searles-Wood on the Committee at the Imperial Institute, and the conclusion I have come to is, that we have not only done some very important work, but what I should call pioneer work, because it is breaking up new ground. We have to find out what timber is available before any further step can be taken.

If I may make one or two criticisms in reference to the paper, I would say I am rather surprised to hear what Mr. Searles-Wood says about Turkey oak, a sample of which is on the table. I do not think it is such a bad wood as the lecturer would have us believe. I have used Turkey oak in pergolas for some years, and it has stood very well. Again, Mr. Searles-Wood is rather down on English oak; but the difficulty we have in this commercial age in regard to English oak is the method of craftsmanship. It requires very careful craftsmanship and it requires time, which cannot often be given to it in these days.

With regard to Oregon pine or Douglas fir, Mr. Searles-Wood draws a distinction between the coast tree and the hinterland tree; but the special distinction which architects should remember with regard to Douglas fir is the difference due to latitude, Canadian fir being better for our purposes than the United States variety, which grows very rapidly and is not such a good tree. Therefore in our specifications we should specialise particularly Douglas fir, and see that we get a Canadian, not a United States, timber. I agree with what Mr. Searles-Wood says in regard to Canadian spruce. In the South of England there seems to be a prejudice against using spruce for constructional purposes, and instead we use yellow Baltic timber. The prejudice does not however prevail in the North of England.

With regard to the work of the Committee with which I am associated, it seems to me that if, in the tests of these timbers, which will probably be published later, a standard could be set up, it would be a great boon, instead of finding it stated as we do now that certain timbers can bear certain weights per lb. and others so much per ton.

Mr. R. L. ROBINSON, O.B.E. (Forestry Commission): I have been very interested in hearing, in this discussion, the question of afforestation touched upon, because it is part of my job to persuade an unwilling Government that afforestation work is worth carrying on. Sir Joseph Cook has said that the Empire should be self-supporting with regard to its timber supplies. What is the position actually? We had much information brought together at the Imperial Conference in 1919, and, as far as I can make out from the reports which were presented to that Conference, although we have something like 1,200,000,000 acres of forest land in the Empire, imports nevertheless exceed exports to the extent of something like 150,000,000 cubic feet per annum. The real problem of timber supply is, where are we going to get our soft woods? Mr. Searles-Wood, in his interesting lecture, has already made that point; and I am emphasising it because when one gets into the question of hard woods, everybody who knows the hardwood of his own country—whether it is English oak, or blackwood, or any other indigenous wood—is convinced that it is the best for the purpose for which he is accustomed to see it used. And it is a fact that if we merely want hard woods, we can get three or four hundred out of the Empire which will fulfil, nearly enough, any general requirement; I except the special requirements.

With regard to conifers and soft woods generally, the position is such as to make those who look ahead very uneasy indeed. Practically all the soft woods in the Empire—if we except the Himalayas, a little soft wood on the Eastern part of Australia, and a little in New Zealand, which they do not wish to export—practically all the conifers are in Canada. There is so little in Queensland that they damped down exportation and reported that in a very few years the supply would be worked out: it is in the Official Report which came from the Queensland Government. (Sir Joseph Cook: "Nonsense!"). I am glad to hear that, because it has lifted at any rate one straw off the camel's back.

The position is this: if one thing is certain it is that the Canadian supply, in due course, will go to America. We used to import from Canada as much timber as America imported from that Dominion; but at the present time 90 per cent. of the Canadian timber goes into the United States, and shortly all of it will go there, and when that occurs this country will be dependent on Russia and the Baltic countries.

It has been suggested that, because we cannot grow in this country all the timber we want, we should not grow any. That was a suggestion that came from the highest quarters and I would like to refute it. If you cannot get a full meal, you like at least to have something. And although we were badly scared in the war over our timber supplies, we are in danger of forgetting about it. Forestry operations in this country, even if they do not yield the magnificent results set out in the optimistic reports to which Sir Joseph Cook alluded, will at least bring to the nation some measure of security. I thank Mr. Searles-Wood for his lecture.

Mr. ALAN MUNBY [F.]: I have had the privilege, on one or two occasions, of acting for the Institute on timber matters, and the occasion which impressed me most was one on which we met a certain English association, and our difficulty there was the question of home-grown timber. This association said to us: "We are prepared to supply you with the timber you want, but what we complain of is, that you do not give us the market for it." We said: "If you tell us you can supply the timber, there is not much doubt about your getting the market for it." That seems to be one of the main difficulties with regard to the use of British timber. You have two sides, and both sides want the field to be ready for them. If they started on some common ground, we could get the question properly solved. There is no doubt about the difficulty that if we specify English timber we are in an uncertainty about being able to get it at the right time and properly seasoned, and people who produce these things say there is no market for them. We want some definite fusion, so that the two sides can come together and make some mutual arrangement which will enable a proper cultivation of British timber to continue.

I have much pleasure in supporting this vote of thanks to Mr. Searles-Wood.

The PRESIDENT: In putting to you this resolution, I only want to add a word of thanks to Mr. Searles-Wood for his valuable paper. Practising architects are very unenterprising in the matter of timber; we are ignorant to a large extent—I am not ashamed to say that; we are timid about specifications; we are far short of what we ought to be in discriminating one timber from another. I heartily join in thanking Mr. Searles-Wood for the very wide range of information he has placed before us.

Mr. SEARLES-WOOD, in reply: I have only one further word to say, and that is about this beautiful wood karri. I said it was stronger than jarrah because of its interlocking grain. I did not say it was good for sleepers. It is used for railway carriages, and the interlocking grain is a feature which makes it stronger than jarrah. I thank you, gentlemen.

Notes on the Planning of Sanatoria, Infectious Diseases Hospitals, and other Public Health Institutions

By JOHN WILSON [F.], F.R.S.E., PRINCIPAL ARCHITECT SCOTTISH BOARD OF HEALTH

(Continued from p. 301).

V. MATERNITY AND CHILD WELFARE CENTRES AND MATERNITY HOMES AND HOSPITALS.

Under the Notification of Births (Extension) Act, 1915, local authorities received statutory powers to "make such arrangements as they think fit and as may be sanctioned by the Local Government Board (now in Scotland the Scottish Board of Health) for attending to the health of expectant mothers and nursing mothers, and of children under five years of age." Over 76 per cent. of the local authorities in Scotland have provided or are in course of providing facilities for the prevention and treatment of ailments in expectant mothers, nursing mothers, and children from birth to school age, and a number of local authorities have also provided facilities for dealing with cases of confinements, both normal and abnormal.

The institutions provided under Maternity and Child Welfare Schemes may be classed as (1) Maternity, Child Welfare and Special Treatment Centres, (2) Maternity Homes and Hospitals, and (3) Day Nurseries.

MATERNITY, CHILD WELFARE AND SPECIAL TREATMENT CENTRES.—The Maternity, Child Welfare and Special Treatment Centre should provide treatment on both preventive and remedial lines, the curative part of the work being analogous to the treatment afforded by the out-patients' department of a general hospital. The size of the centre will vary according to the population of the area to be served, but in a large burgh the following accommodation will be necessary. (Fig. 9).

1. A maternity centre to which expectant mothers will come for advice and any necessary minor treatment for medical conditions. It should consist of:—

- (a) A waiting-room.
- (b) An examination-room with a dressing-room and lavatory accommodation in conjunction.
- (c) The doctor will use the examination-room as his consulting-room.
- (d) A dispensary.
- (e) Sanitary annexe.

2. A child welfare centre to which mothers would bring their children for weighing, examination and treatment, and themselves receive such advice and treatment as is necessary for their own health and the health of their children. (Fig. 10.) This medical supervision should be continuous and at regular intervals up to five years of age, in order that the child's progress

and development may be safeguarded. The child welfare centre should consist of:—

- (a) A waiting-room.
- (b) Weighing and demonstration room.
- (c) Doctor's consulting-room.
- (d) Dispensary.
- (e) Sanitary annexe.

3. A special treatment centre for children from one to five years of age, where minor ailments, especially those affecting eyes, ears, nose, throat, teeth and skin, may be prevented and cured. It should consist of:—

- (a) A waiting-room.
- (b) A treatment-room for eyes, ears, nose and throat.
- (c) A dark-room for eyes (this would also be used as the photographic room in connection with the X-ray room or skin clinic).
- (d) A doctor's consulting-room.
- (e) A dispensary.
- (f) Sanitary annexe (this would be used in common with the annexe in the child welfare centre).

4. A dental clinic should also be provided, and this would consist of:—

- (a) A special waiting-room of small size.
- (b) Consulting and treatment room.

5. A skin clinic should also be provided, and this would consist of:—

- (a) A special waiting-room of small size.
- (b) An X-ray room.
- (c) A doctor's consulting-room.
- (d) A dispensary.
- (e) A disinfecting and sanitary annexe.

6. General or common provision:—

- (a) A general waiting-room, which would be used at different times for 1, 2, and 3.
- (b) A laboratory, which would combine the dispensaries under 1, 2, 3 and 5.
- (c) A doctor's and dentist's private room, which would also serve as their cloakroom.
- (d) A nurses' room, which would serve as the clerical room and inquiry office.
- (e) A rest room with—in large institutions—two small bedrooms in addition. (These would serve for the recovery and temporary detention of patients after minor operations or other treatment.)

BURGH OF MOTHERWELL. PROPOSED CARNEGIE CHILD WELFARE INSTITUTE



ELEVATION TO AIRBLES ROAD.

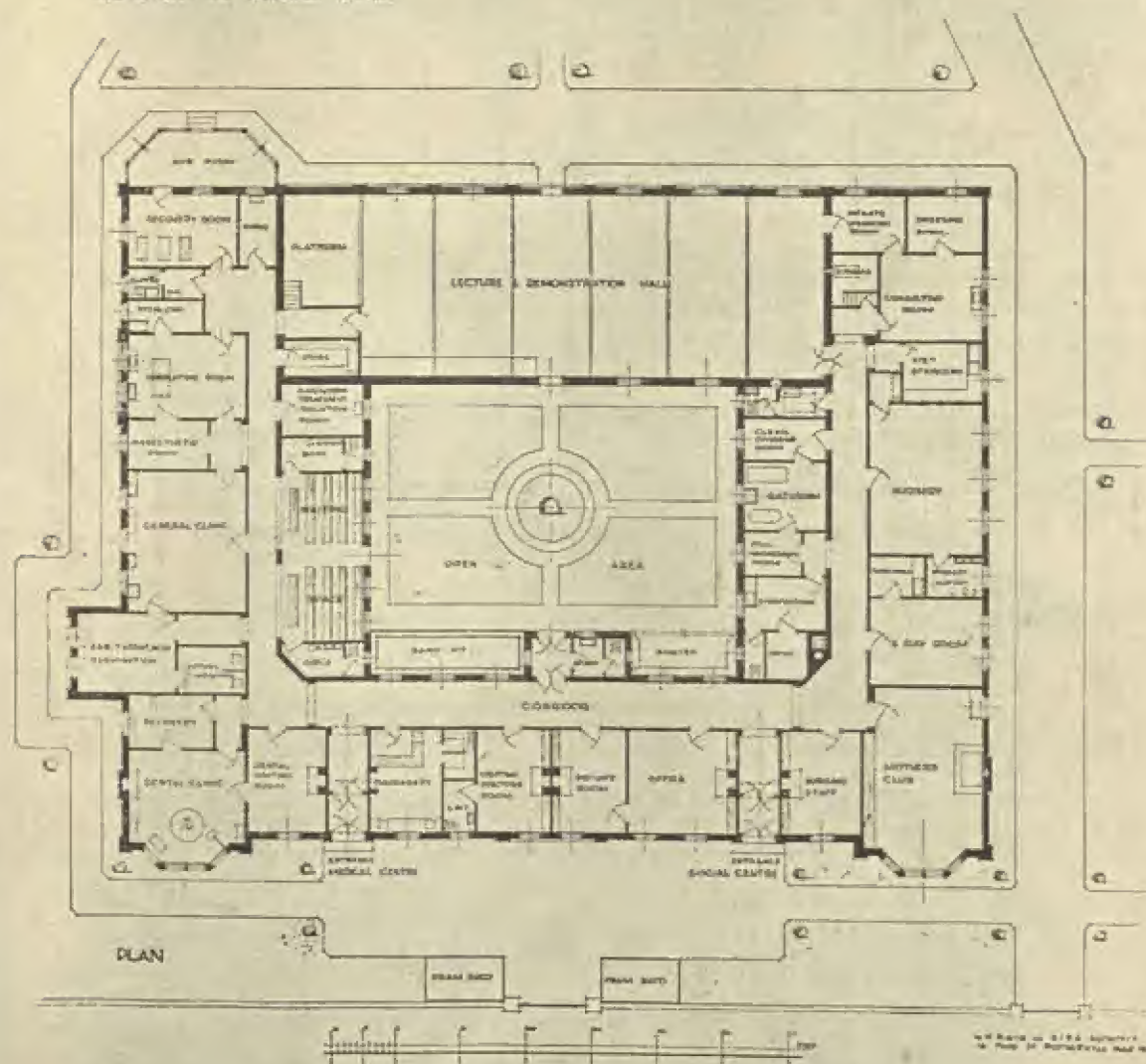


FIG. 9.—MATERNITY, CHILD WELFARE, AND SPECIAL TREATMENT CENTRE, MOTHERWELL
Architect : W. M. Bishop, Lic. R.I.B.A.

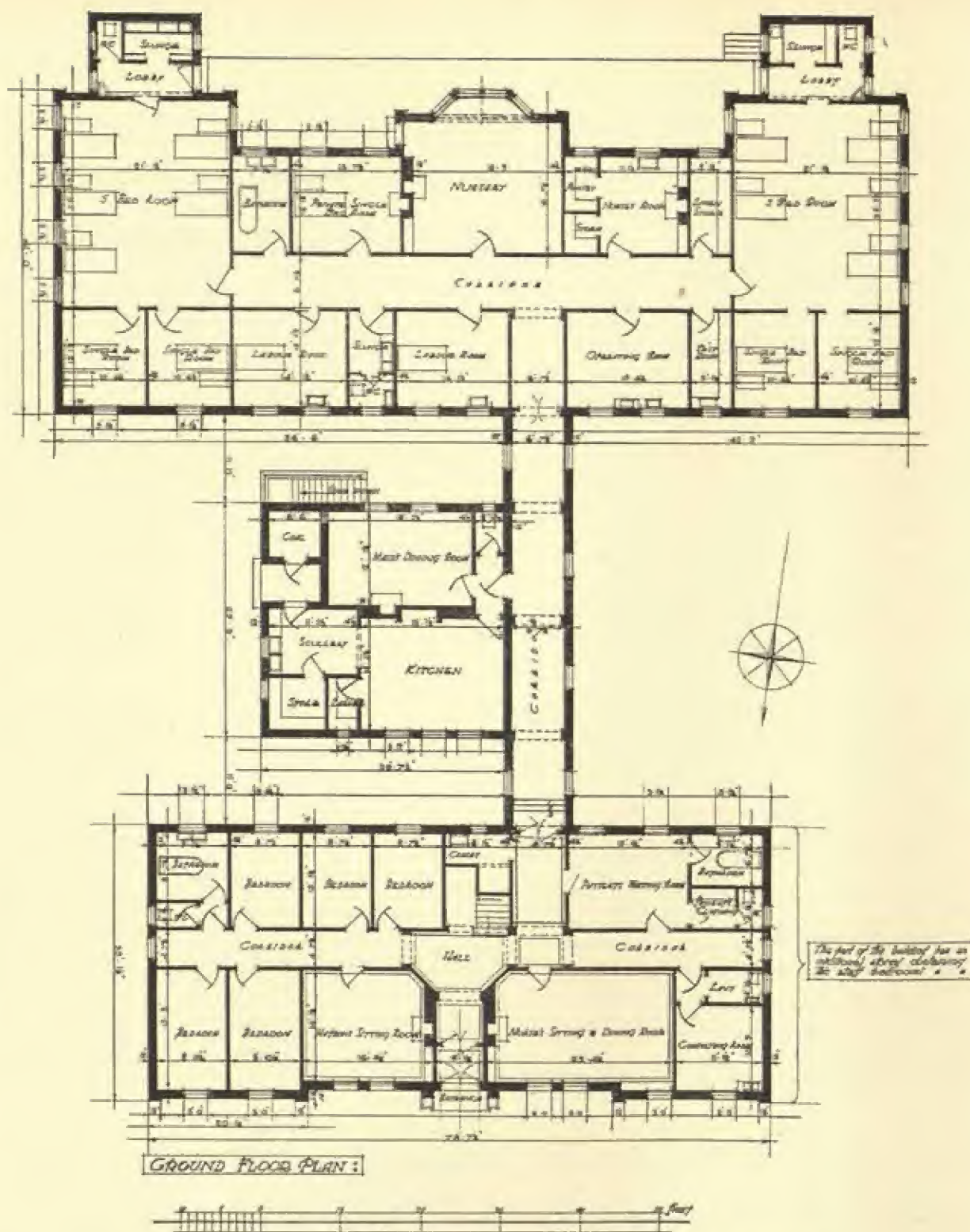


FIG. 10.—MATERNITY HOME, MOTHERWELL. Architect: W. H. Bishop, Lic. R.I.B.A.

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(f) An isolation room for the reception of a case pending removal to the hospital. This may be the same room as the skin clinic waiting-room.

(g) A lecture and demonstration room or hall, which would be used on occasion as the weighing, etc., room in child welfare centre. Classes in cookery, sewing, and hygiene would be held here.

(h) A nurse's bedroom for the occasional accommodation of a nurse who would attend to any case detained in the bedrooms mentioned above in 6 (e).

(i) A covered place for prams and go-cars.

(j) A toddlers' playground with covered playshed and shelter, also sanitary annexe.

Though primarily the medical side of such a centre is the most important, the social side should not be forgotten. It is necessary that the education of mothers in the general hygiene of child life should be provided for. Mothers require to be taught how to make clothes properly, how to cook food correctly, and how to prepare special diets for infants, also given instruction in many other incidental matters.

As mentioned above, a large room or hall is provided for lecture and demonstration purposes, also a nursery provided where children can be kept when their mothers are receiving instruction in cookery or in the making of clothes, etc. An outside playground is provided for the young children in addition to the inside accommodation for infants in arms.

At Motherwell, where the first large maternity and child welfare and special treatment centre in Scotland is being erected, the Carnegie (United Kingdom) Trust gave a donation of £15,000, which made it possible to erect the centre at this time.

MATERNITY HOMES AND HOSPITALS.—Homes are for normal cases, and abnormalities are not dealt with save in cases of emergency.

Hospitals are primarily for abnormalities or complications; though if the hospitals are training schools, the treatment of some normal cases may be necessary.

A home may have from four to fifteen beds, and can be worked in conjunction with a hospital for abnormal or difficult cases of confinement.

Normal cases (which are dealt with in homes) are generally cases whose domestic conditions are unfavourable for confinement at home. Very often a private house can be adapted for the purpose.

A hospital, on the other hand, should have not less than twenty to twenty-four beds. In the larger institution, though primarily accommodation should be provided for abnormal cases, provision should also be made for ordinary cases of confinement. A hospital should serve a population of not less than 200,000 to 300,000 people within easy access. It would seem natural to have an out-patients' department attached to the hospital, but in practice it may be found preferable

to have it situated at the child welfare centre or clinic. An ambulance should be available if the area to be served is at all extensive. (Fig. 10.)

In designing a home or hospital provision should be made for the following:—

1. Lying-in wards should vary in accommodation from one to six beds. The area of the wards should be on the basis of about 100 superficial feet per bed; this is sufficient for the patients and their infants. In some hospitals a certain amount of privacy is obtained by grouping the two or four beds together and separating each group by means of glazed screens 6 feet high.

2. A separate nursery should be provided to accommodate fretful children during the night or children whose mothers have died in the hospital. As a general rule, however, the child should sleep during the night in a cot beside the mother's bed. It should be the night nurse's duty to attend to any child requiring attention. Adjoining the nursery or ward, a small babies' washing room should be provided.

3. It is also found necessary in most homes to make provision for the accommodation of children under school age, whose mothers are in the home, in cases where no other way of providing for their care is possible. This involves the provision of a night nursery as well as a day nursery, with adequate sanitary accommodation. Mothers in the home or hospital must be protected against noises coming from the nursery and any possible danger of infection.

In cases where the child is illegitimate and the mother has no home to go to after her confinement, provision may be made to enable her to stay in the home until suitable arrangements can be made for her.

4. An ordinary labour room should have about 200 square feet of floor area. It should be fitted with a sink and a lavatory basin with an ample supply of hot water. It is desirable even in a small home to have another room that can be used as a second labour room where necessary. A small sterilising room adjoining the labour room or duty-room should be provided. The labour rooms should be isolated from the wards and nursery to avoid all noises being heard.

5. The sink-room should contain a slop sink and a sink with a teak or porcelain-enamelled draining board alongside for the washing of mackintosh sheets. Accommodation should also be provided for bedpans in this apartment.

6. A bottle room should be close to but separate from the nursery. In this room provision should be made for a bunsen ring on which milk can be heated, a sterilising sink in which the bottles can be washed, and a bottle and teat cabinet.

7. Every home or hospital should have a receiving-room placed near the entrance. A shallow bath or

washing slab, a lavatory basin and a w.c. near at hand, should be provided.

8. A duty-room fitted in the usual manner should be provided.

9. Some provision should be made for the isolation of a septic case arising in the home or hospital. In small homes a small ward, isolated from the others, can be used for this purpose. In most cases the patient will be removed to the infectious diseases hospital as soon as possible.

10. In a small home that consists of a single building it will be well to provide a small room or rooms for use as a washing-room and an ironing-room for urgent laundry work that cannot be sent out.

11. Baths and w.c.'s should be provided for the use of patients in the ratio of 1 to 10 patients, and lavatory basins in the ratio of 1 to 6 patients. In some homes a lavatory basin fixed in each ward has been found very convenient.

12. In addition provision should be made for kitchen, scullery and offices, staff accommodation, linen presses, boxroom, cleaners' closet, etc.

The size of the medical staff of a maternity hospital will depend on whether or not it is used as a teaching centre. In the larger hospitals a resident doctor as well as a visiting staff will be necessary.

In a maternity home a matron will have charge, with a doctor available when necessary. It has been found that the ratio of staff will require to be about one nurse to every three mothers and their infants.

In regard to the equipment for homes the labour room must be suitably fitted up. Provision should be made for a special bed, enamelled and glass-topped tables for bowls, etc., an instrument cabinet, and shelves for lotions, disinfectants, etc.

In hospitals a fully equipped operating theatre is essential.

DAY NURSERIES.—It is suggested that day nurseries should not accommodate more than 30 to 40 children for those under five years of age. If only children up to three years of age are to be taken, then 30 children will be sufficient; but if children up to five years of age are to be taken, then 40 may be provided for.

The day nursery should be planned in the following manner. The reception portion should be placed at the entrance, and will consist of a reception-room, a dressing-room, a bathing apartment, and a w.c. apartment. The dressing-room and the bathing apartment should be made ample in size to meet the rush of children at the same hour in the morning. In the former it is advisable to have two sides of the room unbroken by door openings, in order that undressing benches and cupboards to contain the children's outdoor garments may be accommodated, and in the latter two shallow child's

baths on high pedestals and two or three child's lavatory basins should be provided. An apartment of ample size should be provided adjoining the bathing apartment for the accommodation of two child's w.c.'s, separated by a low stall, chambers and slunge sink. A children's room and an infants' room, adjoining one another, should be placed close to the reception portion of the nursery. The floor space allowed in these rooms for each child is 30 square feet. The roofs over these rooms should be kept open, with a height of 9 feet at the wall-head level. These rooms should have a southern exposure, with large French windows opening on a covered verandah, the floor of which may be concrete and about 10 feet wide. The roof of the verandah should project about 6 feet from the wall and be glazed. Where the staff is a non-resident one, the administration portion of the day nursery should consist of kitchen, scullery, larder, milk larder, staff-room and lavatory, linen closet, cleaners' closet with sink, small wash-house and drying-room. A small boiler-house should be provided to accommodate two small independent boilers—one for heating the rooms by means of low-pressure hot-water radiators, and the other for the supply of domestic hot water to sink, baths and basins.

The building may be of light construction, with the roofs covered with asbestos or ordinary slates. The floors, except those of the children's and infants' rooms, dressing-room, kitchen and staff-room, which will be wood, should be concrete. Sufficient space around the building should be provided for a playground, and a small pram shelter should be placed near the main entrance.

VI. VENEREAL DISEASES CLINICS.

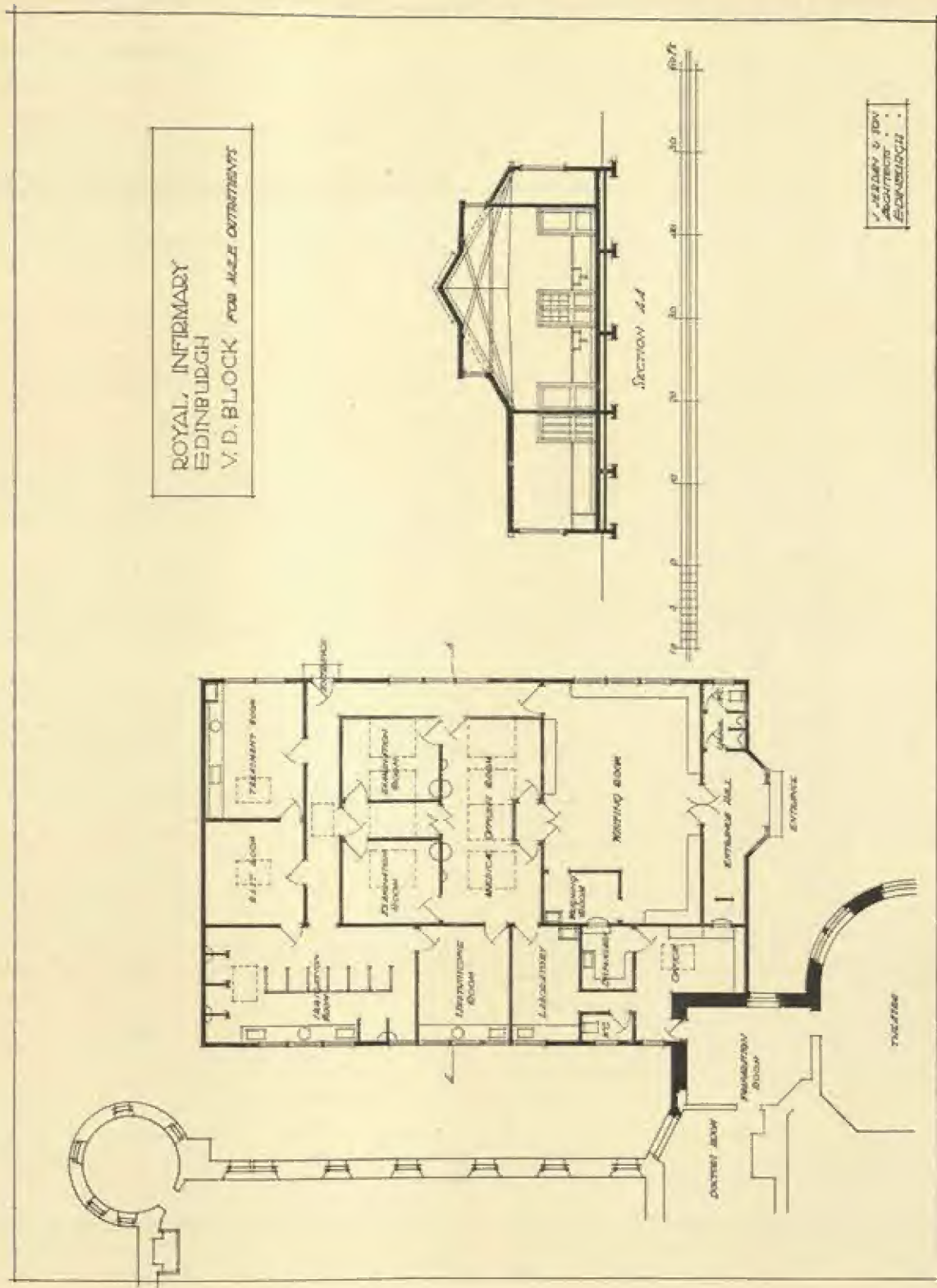
It is just over five years since the Scottish Board of Health placed on Local Authorities by Order the obligation to submit schemes for the treatment and prevention of venereal diseases.

Over 79 per cent. of the local authorities have provided or are in course of providing facilities for the free treatment of all classes at convenient hours and under suitable conditions.

In the larger cities clinic accommodation has been found in the general hospitals. In smaller towns and country areas a wood hutment has often been utilised for use as a clinic. Both sexes are treated at the clinics, but at separate hours or on separate days.

The accommodation required for the larger type of clinic is as follows:—(Figs. 11 and 12).

1. A waiting-room of moderate size, with an office adjoining, should be provided. The clerk in charge hands out the treatment cards, or in the case of new patients makes arrangements for their examination by the medical officer. A small portion of the office should be used as a weighing space for patients. A lavatory should also be attached to the waiting-room.



ROYAL INFIRMARY
EDINBURGH
V.D. BLOCK FOR MALE OUTPATIENTS

J. JERDAN & SON
ARCHITECTS
EDINBURGH

FIG. 11.—V.D. CLINIC, ROYAL INFIRMARY, EDINBURGH. Architects : J. Jerdan & Son

2. A medical officer's examination room, about 15 feet by 12 feet in size, with sink and basin, should be provided. Two dressing cubicles, about 8 feet by 6 feet, should be attached to this apartment, and each have a small urinal basin. After examination by the doctor the patient passes to either the treatment room or to the irrigation room, and both these rooms should be placed as near as possible to the examination room.

3. The treatment or "606" room should be about 14 feet by 12 feet in size. At one end sinks and lavatory basin with hot and cold water should be placed. Shelving for bottles should also be provided.

4. The irrigation room should be of an oblong shape, with the walls tiled to a height of 5 feet.

The floor of the irrigation room may be laid in asphalt, lead or vitreous tiles with $\frac{3}{4}$ inch joints, and graded to a channel of enamelled fireclay. Asphalt is difficult to lay with an absolutely even surface, and water tends to lie in small depressions; lead is apt to be indented by the traffic of hob-nailed boots. Possibly a floor laid in tiles with $\frac{1}{2}$ inch joints is more satisfactory than the other two. Concrete, because of its porosity, is not a satisfactory material for the purpose.

A number of stalls should be placed in the room, with an inspection passage behind for the doctor or attendant to give instruction to the patient who has not yet learned how to irrigate himself. The stall divisions may be of porcelain-enamelled iron or enamelled fireclay, 5 feet 6 inches high, and placed at 2 feet 6 inches to 3 feet centres.

An enamelled fireclay trough, fixed about 2 feet 4 inches to 2 feet 6 inches above the floor, should be placed at the back of the stall divisions. The back of the stall divisions should be enclosed by means of a slab of the material chosen to a height of 9 inches above the trough level. The floor channel will be placed immediately under the trough and connected to the soil drain.

The irrigator apparatus for each stall consists of a metal container of two pints capacity attached to a pulley arrangement, in order that the pressure required for irrigation purposes can be regulated. Arrangements should be made whereby the container cannot be raised to a greater height than 3 feet 6 inches or 4 feet above the fireclay trough. One or two sitz baths or bidets should be placed against the side walls of the room for the use of patients who require them. A sink and lavatory basin with hot and cold water should also be provided.

In some cases a continuous enamelled fireclay trough fixed to the wall about 2 feet 4 inches to 2 feet 6 inches above the floor, with or without stall divisions, has been used.

It is contended that, apart from the lack of privacy due to the omission of stalls, it is impossible to supervise the patients properly from behind when irrigating

themselves whether stalls are used or not. This can only be done when the stalls have an inspection passage at the back.

5. A small waiting-room or rest-room should be provided close to the treatment and the irrigation rooms. This room can be used for two purposes: (a) for the patients who have passed through the doctor's hands in the examination room and are waiting for treatment in either the treatment room or the irrigation room, and (b) for the reception of a patient who has temporarily collapsed under treatment.

6. A special room should be provided for urethroscopic work, with the necessary apparatus.

7. A laboratory in which tests and culture work can be done should be provided. A small dispensary can be attached to the laboratory.

A store should be placed near the treatment room for drugs and dressings, while a linen press and lavatory accommodation for the staff should also be provided.

The floors of all the apartments, with the exception of the irrigation room and the laboratory, may be of wood covered with linoleum.

In the smaller centres the clinic will of necessity be smaller, but should contain a waiting-room with office, an examination room, a treatment room, an irrigation room, and a small rest-room, with the necessary lavatory accommodation.

It is essential that the clinic should be so planned that the patients can pass from the examination room to the treatment or irrigation rooms and then leave the clinic without again passing through the waiting-room.

Where the clinic is attached to a general hospital, wards for in-patients of both sexes should be provided, but where the clinic is not worked in connection with a general hospital it may be necessary to provide a small block attached to the clinic by means of a connecting corridor. In this block it will be necessary to provide two wards, each containing two or three beds, for patients of both sexes. Each ward should have a sanitary annexe containing bathroom and w.c. A nurse's duty-room placed between the wards, a staff lavatory, a sink-room, and a linen press are also required.

VII. NURSES' HOUSES AND HOSPICES IN THE HIGHLANDS AND ISLANDS.

Power is given to Local Authorities for the erection of doctors' houses, nurses' houses and hospices under schemes made in terms of the Highlands and Islands (Medical Service) Grant Act, 1913, and approved by the Scottish Board of Health.

In sparsely populated districts it is almost impossible for the doctor to give the requisite continuous attendance in serious medical and surgical cases. To meet this difficulty it is intended to provide the necessary faci-

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ties by the erection of nurses' houses and hospices near or within easy reach of a doctor's house.

The smallest of these hospices will consist of a house of three apartments for the nurse, with the addition of a consulting-room and dispensary for the doctor (about 15 feet by 10 feet), a single-bed ward (about 11 feet 6 inches by 10 feet), a small linen press, and, where the water supply is sufficient, a bathroom with a w.c.

In certain districts larger accommodation will be needed, and hospices may require to contain a nurse's

house of four apartments, and two wards with one or two beds in each. These hospices will be of one storey, and built of local stone or concrete blocks.

In conclusion, I have to thank my professional friends for the help given me in preparing the lecture, and also those architects who have permitted me to use their plans to illustrate the lecture.

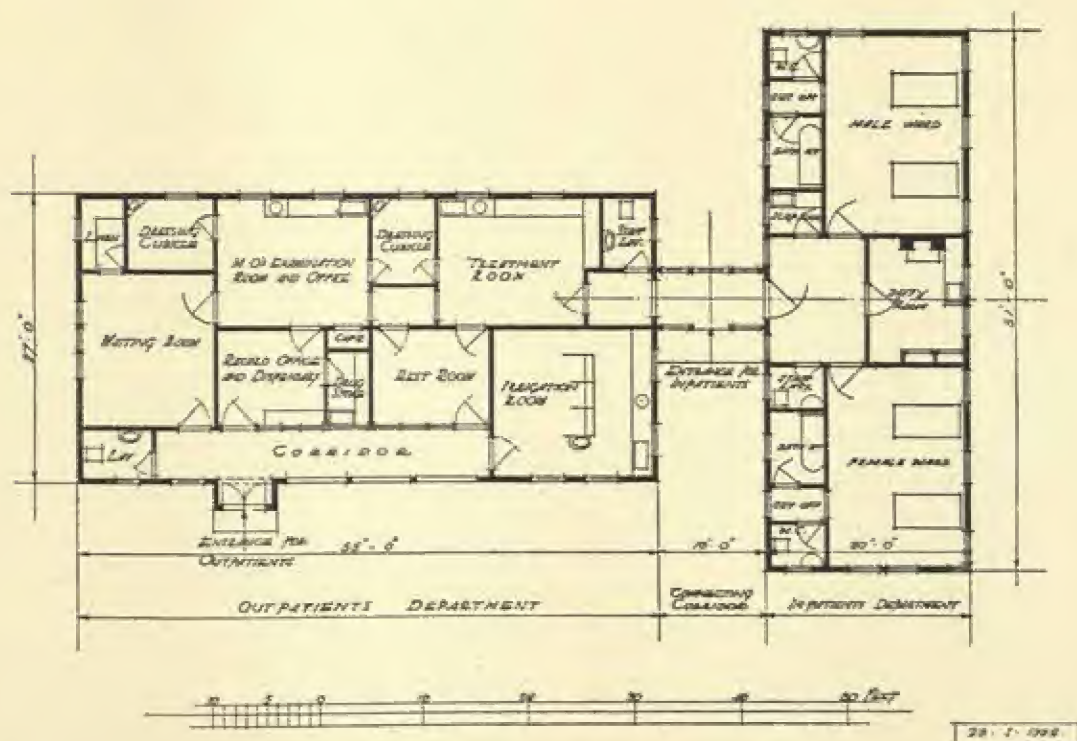


FIG. 12.—MODEL PLAN OF GENERAL DISEASES CLINIC

Norfolk and Norwich Association of Architects

A NEW ALLIED SOCIETY

The Norfolk and Norwich Association of Architects, which was founded last year for the advancement of the art of architecture and the protection of the profession in the county of Norfolk, and which has been admitted by the Council of the Institute as an Allied Society, held its inaugural banquet at Norwich on 24 March. Mr. Edward Boardman [F.], the first President of the Association, occupied the chair, and the principal guest was Sir Aston Webb, P.R.A. Among others present were the Lord Mayor of Norwich (Mr. H. N. Holmes), the Sheriff (Mr. H. Harper Smith), the Dean of Norwich, Sir George Chamberlain, Sir Eustace Gurney, Mr. E. G. Buxton (High Sheriff of Norfolk), Mr. W. A. Cozens Hardy, Mr. G. J. Skipper, Mr. J. W. Cockrill (Borough Surveyor, Great Yarmouth), Mr. A. E. Collins (City Engineer), Mr. W. Smith (President, Master Builders' Association), Mr. Ian MacAlister (Secretary R.I.B.A.), and Mr. E. W. B. Scott (Hon. Secretary of the Norfolk and Norwich Association).

The President expressed his gratitude to Sir Aston Webb for leaving his important duties in London to come and give them some inspiration and encouragement. Doctors and lawyers and men of commerce had their associations, and the architects of Norwich had felt for a long time that it would be good for those engaged in the same occupation and possessing the same ideals to meet together occasionally. Some eighteen months ago a rather loose organisation was established consisting of the Norwich members of the Royal Institute of British Architects, but under the advice and guidance of Mr. MacAlister, the secretary of the Royal Institute, they had opened their doors, and admitted all those in the county and city who were engaged in the practice of architecture. They did not want to set themselves up as a trade union in the narrow sense. There was work that they could do that concerned the public welfare. It was a good thing, too, for architects to exchange opinions. They could do a good deal in helping the younger members of the profession, and he hoped also they might be of service to the city. People were taking more interest in the appearance of the public streets, and when a question arose such as the position of a statue or the lay-out of a public place their association ought to be consulted. They had an excellent society in the Norfolk and Norwich Archaeological Society, with which they might often work hand in hand in the careful tending and preservation of ancient buildings. It was also desirable that architects and builders should meet together. Mr. Boardman expressed his thanks to Mr. Eric Scott for his work as honorary secretary of their association.

The Lord Mayor said one could not help associating Sir Aston Webb with the work he had done in connection with the new front to Buckingham Palace, the architectural surroundings for the Victoria Memorial, the Admiralty Arch, and other important works. The local association were to be congratulated on its good fortune in having him with them.

Mr. J. H. F. Walter (President of the Norfolk and Norwich Archaeological Society), referring to the relations between the Archaeological Society and the architects, said it seemed to him that they each sometimes adopted rather a *non possumus* attitude. They could not always see eye to eye, but that was no reason why they should totally disagree, and mutual intercourse should prove helpful.

Sir Aston Webb said it was a great pleasure for him to be with them that evening. He had thought it his duty to come, representing as he did at the moment not only architecture, but, as President of the Royal Academy, other arts as well. People did not always agree in matters of art; he might almost say that they seldom agreed in matters of art. But they should try to come more into agreement, and he felt confident that such associations as that recently formed at Norwich helped to promote a better understanding. The ramifications of the R.I.B.A. and its Allied Societies covered practically the whole of the United Kingdom, and, indeed, the whole of the Dominions of the Empire; and it was not well that any group of architects should not be represented in the confederation. He spoke with some knowledge, because he had held, he thought, every honorary office in the Architectural Association, the R.I.B.A., and the Royal Academy. He had spent a great deal of his life in connection with these societies, and he would not have done so unless he had thought that he might, at any rate, be of some little use to his brother architects. It was for the general good of the community that architects should join together. It led to good fellowship, and it also led to what was still more important—a high standard of practice. Fifteen or twenty years ago there was a heated discussion amongst architects and those connected with architecture whether architecture was a profession or an art. Some of those who contended that architecture was only an art, resigned, for a time, their membership of the Institute, but they eventually came back again. The truth was, of course, that architecture was both an art and a profession. Young men who were entering the profession would, he hoped, take advantage of the opportunities that were being provided for their education. Delightful as the practice of architecture was, it was also a very serious and responsible occupa-

tion. An architect had to spend other people's money, and, as a man of honour and a just man, it was imperative he should see that every penny was laid out to the best advantage. Permanence was a quality of architecture: there were, of course, buildings erected for temporary purposes, but most buildings were intended to last a long time. Every building ought to possess the qualities of beauty and proportion. It was possible for architecture to make as strong an appeal to the emotions as music or sculpture.

Those present, Sir Aston Webb said, were inhabitants of a city that was historical and beautiful—a great possession for any body of citizens. In a modern city, although it ought not perhaps to be so, it was not possible to awaken the same interest or enthusiasm. It was a great privilege for young men to grow up in such a city as Norwich. Their cathedral was, in his opinion, one of the finest of Norman churches. It had all the grandeur and massiveness of Norman work and yet had a lightness that was often absent in Norman churches. Norwich, he had been told, contained thirty-five churches, and he had seen in the Castle Museum an excellent model of the city which showed the towers of these churches. He could not help wondering whether there had been any suggestion that there were too many churches in Norwich! He said that because there was an idea in the City of London that there were too many churches there. He hoped that if the number of churches in Norwich was found to be a little redundant they would still maintain them for the sake of the beauty and amenity of their beautiful city. If they were pulled down they would find that their loss could never be replaced. Sir Aston then referred to the work of the London Society in preserving and promoting the amenities of the City of London.

ALLIED SOCIETIES.

BIRMINGHAM ARCHITECTURAL ASSOCIATION.

The ninth general meeting of the Birmingham Architectural Association was held at the Birmingham School of Art on Friday, 24 February. Mr. H. T. Buckland [F.] took the chair, and Mr. H. Worthington [A.], M.A., gave an illustrated lecture on "Michele San Michele of Verona."

Mr. Worthington spoke of the danger of blind enthusiasm for a past style unless tempered by critical historical study, and said that the best way to study a period is to specialise on a man.

San Michele was a typical child of his age, with a passion for Roman antiquity, yet he faced the needs of his day, and in his fortifications adapted the needs of modern military engineering to meet the developments of modern artillery. He recast the planning of town and country houses to meet a growing sense of security in city life. One of the last of the Renaissance giants, he sums up the period of culmination, and shows traces of the coming decadence.

In character San Michele had the enlarged outlook of one who constantly associated with great men. He was a

loyal citizen, a staunch servant of the state, and a devoted friend. He practised in the same manner as modern architects, and had his share of awkward and exasperating clients.

Mr. Worthington showed many slides illustrating the walls and gates around Verona, the fortifications at Parma and Piacenza, and the Fort of S. Andrea, carried out by San Michele, and concluded with a description of his characteristics.

THE ROYAL INSTITUTE OF THE ARCHITECTS OF WESTERN AUSTRALIA INCORPORATED.

The amended constitution of this Allied Society, carrying with it the use of the title "Royal," has been approved by the Council of the Institute under the provisions of By-law 79.

Exhibition of Original Architectural Drawings of the Seventeenth Century

An exhibition of original architectural drawings of the seventeenth century will be held in the galleries of the Institute from the 2nd to the 17th May. It comprises two historic collections, of which one is only a recent discovery. The larger forms the Coke collection of Smithson drawings, consisting of about a hundred sheets, which has kindly been loaned to the Institute by Mrs. S. Coke, of Brookhill Hall, near Nottingham, their present owner. Mr. Gotch, in a Paper which he read before the Institute in 1908, on "The Development of House Design in the Reigns of Elizabeth and James," deals at length with the collection, of which he gives a catalogue. He is unable, however, in his critical analysis, clearly to identify to which of three Smithsons (Robert, Huntingdon or John), the drawings may be definitely ascribed. The second collection, comprising drawings by John Webb (1611-1672), has only recently become known, and is fully described by Mr. Gotch in a Paper which he contributed to the Institute JOURNAL on 24 September 1921. They have been lent to the Institute by Sir Vere Isham, of Lamport Hall, Northamptonshire, in the possession of whose family they have been since the time of Sir Justinian Isham, the second baronet, who employed Webb as his architect. In addition to the drawings there is a number of letters from Webb which throw considerable light on the practice of an architect in the seventeenth century. By members of the Institute and others who are interested in a historic phase of English architecture the exhibition of the drawings will be welcomed, and the courtesy of Mrs. Coke and Sir Vere Isham in giving the drawings a wider publicity than is possible in a private collection much appreciated. Mr. Gotch has kindly consented to give an address upon the drawings during the exhibition.

Street Architecture Award

1. With a view to encouraging excellence of design in street architecture, it has been decided to examine annually the buildings erected or completed during the year ending 31 December, within a radius of four miles from Charing Cross, and to award a premium for the most meritorious external design.

2. **PREMIUMS.**—The architect of the premiated building will receive a bronze medal presented by the Royal Institute, together with a diploma signed by the Jury of Assessors. For the present the Jury propose to hold in reserve the question of affixing devices to premiated buildings.

3. CONDITIONS :—

(a) The building must front to a street, road, square or court to which the public has access within the four-mile radius. The award is intended for a street façade as opposed to churches or public buildings, for which a separate medal may be awarded.*

(b) The architect is the person from whose design the building has been executed.

(c) Any Member or Licentiate of the Royal Institute shall be at liberty to nominate any building (not excluding his own work) for consideration by the Jury. Forms of nomination will be issued with the first two numbers of the JOURNAL in each Session. These forms, which must be accompanied by an elevation to scale and a photograph of the exterior of the completed building, for the information of the Jury, must be in the hands of the Secretary R.I.B.A. by the end of February 1923. These documents will be returned (carriage paid) to the sender after the award has been made. The Jury do not bind themselves to confine their selection to the buildings nominated.

4. **JURY.**—The award will be made by a Jury of five, appointed by the Council of the Royal Institute, and composed of :—

Three architects,

One Member of the Royal Academy,

One Honorary Fellow of the Royal Institute.

The term of appointment will be for three years. Before making their award, the Jury will personally inspect such of the buildings as they deem worthy. The award will be final and binding on the Council of the Royal Institute and the architects concerned.

5. **PRESENTATION.**—The presentation of the premium to the architect will be made annually at a meeting of the Royal Institute, of which the date will be announced in the Press.

In submitting the above conditions the Jury desire to inform the Council that they are not yet in a position to select an artist for the design of the medal, but that they hope to make a recommendation upon this point later.

* (NOTE.—It may be possible to extend the system of awards later on to provincial cities and towns in conjunction with the Allied Societies.)

For the present the Jury propose to hold in reserve the question of affixing devices to premiated buildings.

The Jury for the award for the present year consists of :—

The Earl of Crawford and Balcarres [*Hon. F.*], Chairman.

Sir Aston Webb [*F.*], P.R.A., Past President R.I.B.A.

Mr. Paul Waterhouse, P.R.I.B.A.

Sir Reginald Blomfield, R.A., Past President R.I.B.A.

Mr. E. Guy Dawber, Vice-President R.I.B.A.

Summoning General Meetings

The Secretary of the Institute has sent the following letter to the Press :—

22 March 1922.

DEAR SIR,—Several members interested in this question have been inquiring from me as to the method of summoning General Meetings of the Royal Institute and as to the length of notice required, and I understand that there has been some correspondence in the professional Press on the point. It may interest your readers to have a statement as to this.

Broadly speaking, there are three ways in which a matter of this kind can be laid before the members of the Royal Institute for consideration :—

1. The Council can summon a Special General Meeting for any date they choose, specifying the business to be discussed. They can give the amplest possible notice of such a meeting, and they can call it either on their own initiative or at the request of a member or members.

2. The subject can be discussed by the Council putting it down as one of the matters for consideration at one of the four fixed Business Meetings of the Session; or any member or members can send in notice for such a meeting. In this case very long notice can be given of the meeting so as to ensure adequate discussion.

3. Any twelve members can demand the summoning of a Special General Meeting by sending a requisition to the Council, and the Council are bound forthwith to call the meeting. It must be held within three weeks after the delivery of the requisition to the Secretary. This provision in the by-laws obviously makes it impossible to give more than at the outside 10 days' notice to members, as the requisition to the Secretary has first to be laid before the next meeting of the Council, who have to fix the date and order the printing and sending out of the notice.

In other words, there are three methods of summoning these meetings, two of which allow of ample notice being given, while the other makes it impossible to give more than a very few days' notice. It is, of course, open to members to adopt any of these three methods which they prefer.—Faithfully yours,

IAN MACALISTER,

Secretary.

Competitions

AUCKLAND MEMORIAL COMPETITION.

The following cablegram was received from the Mayor of Auckland, New Zealand, on 29 March 1922 :

"The Secretary, Royal Institute of British Architects, 9 Conduit Street, W.—Memorial Museum Competition. Major Axes Maori Hall and Maori Court must be parallel. In Halls where span requires intermediate support desirable two such supports placed approximately quarter span from adjoining wall. In Main Entrance Hall, Central Hall, Central War Memorial Hall, and Hall Memories, supports left discretion competitors. For Memorial Trophies and Memories Halls lighting system left competitors. Posting first mail final memoranda and Answers Questions. Designs due Auckland thirtieth June, but owing irregularity mails will allow fortnight extension. Advise competitors."

The following cablegram has been sent by the R.I.B.A. to the promoters of the Auckland Memorial Competition :—

" 29 March 1922.

"Gunson, Mayor, Auckland, New Zealand. Corrected conditions received London March eighteenth. Further answers expected middle April and middle May. Drawings must leave London twenty-sixth April to arrive Auckland thirtieth June. Time for completion obviously insufficient. Committee emphatically request date for despatch of designs from London be fixed thirtieth June. Please cable reply."

The following cable was received on 31 March 1922 in reply : "Ribazo London.—Agree your request extension June thirtieth. London subject plans being shipped first mailboat thereafter."

NEWPORT (MON) WAR MEMORIAL COMPETITION.

The Competitions Committee desire to call the attention of Members and Licentiates to the fact that the Conditions of the above Competition are unsatisfactory. The Competitions Committee are in negotiation with the promoters in the hope of securing an amendment. In the meantime Members and Licentiates are advised to take no part in the Competition.

IAN MACALISTER,
Secretary.

COMPETITIONS OPEN.

Auckland War Memorial.
R.I.B.A. Colour Competition.
Dundee War Memorial.

The conditions and other documents relating to the above competitions may be consulted in the Library.

Notices

ELECTION OF MEMBERS, 12TH JUNE, 1922.

The following applications for election have been received. Notice of any objection or other communication respecting the candidates must be sent to the Secretary for submission to the Council prior to Monday, 15th May, 1922.

AS FELLOWS (10).

- ANDERSON : ANDREW WHITFORD [*A.* 1884], 28 High Street, Watford ; 18 Wellington Road, Watford.
BRADDELL : THOMAS ARTHUR DARCY [*A.* 1920], 13 Old Quebec Street, Marble Arch, W. ; 8 Lansdowne Road, W.11.
BROWN : WILLIAM EDWARD ARTHUR [*A.* 1904], 9 Regent Street, S.W.1 ; 69 Ross Road, Wallington, Surrey.
CROMIE : ROBERT [*A.* 1914], 8 Gloucester Mansions, Cambridge Circus, W. ; 21 Adelaide Road, Surbiton.
CURTIS : WILLIAM THOMAS [*A.* 1904], Guildhall, Westminster, S.W. ; "Linkwood," Link Lane, Wallington, Surrey.
MOLE : CHARLES JOHNS, M.B.E. [*A.* 1909], H.M. Office of Works, Westminster, S.W.1 ; "Glenlyn," Bowes Road, Walton-on-Thames.
OWEN : GEOFFREY [*A.* 1912], Palmyra Square Chambers, Warrington ; Myddleton Hall, near Warrington.
RIDDEY : CHARLES [*A.* 1898], Gold Street Chambers, Kettering ; "Stoneleigh," Queensberry Road, Kettering.
RUDDLE : ALAN WILFRID [*A.* 1909], 6 Long Causeway, Peterborough ; Boroughbury, Peterborough.
SOUSTER : ERNEST GEORGE WILLIAM [*A.* 1905], 3 St. James's Street, S.W.1 ; Strafford House, Crescent Gardens, Wimbledon Park, S.W.

AS ASSOCIATES (24).

- ALWARD : WILLIAM WALLACE, M.Arch. [Special War Examination], c/o Messrs. Nobbs & Hyde, 14 Phillips Square, Montreal, Canada ; 127 Drummond Street, Montreal, Canada.
ANDREWS : CYRIL DOUGLAS [Special War Examination], 222 High Street, Ponders End, Middlesex.
BEAUMONT : JOHN SOMERVILLE, M.C., B.A. [S. 1921—Special War Exemption], 24 Brazennose Street, Manchester ; 4 Wellington Crescent, Upper Chorlton Road, Manchester.
CHIEK : ALFRED CYRIL [Special War Examination], c/o Messrs. Seale & Riley, 25 Horsefair Street, Leicester ; 98 Howard Road, Clarendon Park, Leicester.
CLARK : HAROLD GOUNDRY [Special War Examination], Feethams, Darlington ; Summerhill, Abbey Road, Darlington.
DAVIES : HAROLD HINCHLIFFE [Special War Examination], 14 North John Street, Liverpool ; 20 Eighth Avenue, Stonycroft, Liverpool.
DAWSON : HARVEY ALEXANDER [Special War Examination], c/o Bank of Montreal, 9 Waterloo Place, S.W.1.
HARRILD : FRED, M.A.Oxon [Special War Examination], 57A High Street, Totnes, S. Devon.
HAYWARD : JOHN HAROLD [Special War Examination], 60 Grant Street, Glasgow.
JACKSON : HAROLD THOMAS [Special War Examination], Bush House, Aldwych, W.C.2 ; 15 Petherton Road, Highbury, N.5.
JENKINS : THOMAS TREVELYAN [S. 1922—Special War Exemption], 18A Baliol Chambers, Stanley Street, Liverpool ; 6 Tennyson Street, Princes Park, Liverpool.
LAY : ARTHUR PURCELL [Special War Examination], 149 Upper Richmond Road, Putney, S.W.15.
PRYNNE : HAROLD FELLOWES [S. 1921—Special War Exemption], P.W.D. Secretariat, Chepauk, Madras, India.

Members' Column

- REEVES : JOHN EDWARD [Special War Examination], 158 Waterloo Road, Smethwick, Birmingham.
 ROBERTSON : ALEXANDER SMEATON [Special War Examination], Department of Works and Railways, Treasury Place, Melbourne, Australia.
 SADLER : WILLIAM [Special War Examination], 41 Thornhill Road, N.1.
 SAMPLE : EDMUND FREDRICK RONALD [Special War Examination], c/o Messrs. Denison, Ran. & Gibbs, Beaconsfield Arcade, Hong Kong, China.
 SEATON : WILLIAM GEORGE [Special War Examination], 22 Mackintosh Road, Pontypridd, Glam.
 THOMPSON : CHRISTOPHER CRAIG [Special War Examination], 24 Crescent Road, Toronto, Canada.
 THREADGOLD : ROBERT AINSLIE [S. 1914—Special War Exemption], 107 Hall Lane, Liverpool, E.
 TOWNSEND : ARTHUR CECIL [Special War Examination], 7 Rawlins Street, Fairfield, Liverpool.
 VON BERG : WILFRIED CLEMENT, M.C. [Special War Examination], Imperial War Graves Commission, St. Omer, France.
 WHITLEY : CUTHBERT CLAUDE MORTIER [Special Examination], 37 Harold Street, Hawthorn, Victoria, Australia.
 WILLMAN : JOHN HENRY [Special War Examination], 65 Greenway Avenue, Taunton.

AS HONORARY ASSOCIATES (10).

- ASHBY : THOMAS, D.Litt., F.S.A., Director of the British School at Rome, Valle Giulia, Rome, Italy.
 BELL : CHARLES FRANCIS, M.A., F.S.A., Ashmolean Museum, Oxford.
 CLUTTON-BROCK : ARTHUR, B.A., The Red House, Godalming.
 COCKERELL : SYDNEY CARLYLE, M.A., Director of the Fitzwilliam Museum, Cambridge.
 CORNFORD : LESLIE COPE, 3 Melina Place, Grove End Road, N.W.8.
 CRANAGE : REV. DAVID HERBERT SOMERSET, Litt.D., F.S.A., 8 Park Terrace, Cambridge.
 MONTGOMERY : HENRY GREVILLE, J.P., 39 Wynnistay Gardens, W.8.
 NEW : EDMUND HORT, 17 Worcester Place, Oxford.
 PHILLIPS : R. RANDAL, Atherton House, Ham, near Richmond, Surrey.
 WELLER : HENRY OWEN, B.Sc., M.Inst.C.E., Director of Building Research, 16 and 18 Old Queen Street, Westminster, S.W.1.

THE CIVIC SURVEY OF GREATER LONDON.

It has been decided by the Council of the Institute to approach the London County Council and endeavour to arrange for the continuance of the work of the Civic Survey for Greater London as a means of providing employment for architects during the present period of depression.

THE METROPOLITAN WATER BOARD.

Mr. H. W. Burrows [A.] has been appointed as representative of the Royal Institute to confer with a Sub-Committee of the Water Board on the revision of the regulations for the prevention of waste, misuse, undue consumption, or contamination of water.

REINSTATEMENT OF MEMBERS.

Mr. C. F. Ward [F.], and Mr. J. Hardwick Higgs [Licentiate], have been reinstated members of the Institute.

FOR SALE.

STRONG dumpy level with compass in mahogany case.—Apply R. E. Crossland, A.R.I.B.A., 9, King's Bench Walk, Temple, E.C.4.
 LARGE set of drawers (in two pieces) to take Antiquarian size sheets, about 4 ft. high, deep drawers.—Apply "Architect," 73, Oakhill Road, East Putney, S.W.15.

PARTNERSHIP.

A.R.I.B.A. desires a share in well-established Practice, Provinces preferred. Would like to supervise or commence a Provincial Practice in connection with one already established in London. Age 31. Six years' office experience (general practice) and two years School of Architecture, University College, London. War Service.—Box No. 1735, c/o Secretary R.I.B.A., 9 Conduit Street, W.1.

F.R.I.B.A. requires a partner. General country practice.—Apply Box 447, c/o Secretary R.I.B.A., 9, Conduit Street, W.

APPOINTMENTS WANTED.

A.R.I.B.A. (28) desires position as Assistant in a London office working drawings, details, specifications, surveying and measuring. Neat and accurate draughtsman. Excellent testimonials.—Apply Box No. 643, c/o Secretary R.I.B.A., 9, Conduit Street, W.

ARCHITECT, Fellow Royal Institute Architects, Ireland, and M.T.P.I., until recently practising in Ireland, wants partnership Plymouth or neighbourhood. Age 40. Excellent connection. Expert on Housing and Town Planning. Would manage branch office for London firm.—Apply Box 3422, c/o The Secretary R.I.B.A., 9 Conduit Street, W.1.

Minutes XIV

SESSION 1921—22.

At the Eleventh General Meeting (Ordinary) of the Session 1921-1922, held on Monday, 3 April 1922, at 8 p.m.—Mr. Paul Waterhouse, President, in the chair. The attendance book was signed by 17 Fellows (including 5 members of the Council), 21 Associates (including 1 member of the Council), 2 Licentiates, and a large number of visitors.

The Minutes of the Tenth Meeting held on 20 March, having been taken as read, were confirmed and signed.

The Hon. Secretary announced the decease of Mr. Frederick William Marks, elected Associate 1887, Fellow 1905. It was RESOLVED that the regrets of the Institute for the loss of this Member be recorded on the Minutes of the Meeting, and that a message of condolence and sympathy be conveyed to his relatives.

At the suggestion of the Hon. Secretary, it was RESOLVED that a message of congratulation be sent to Mr. G. Gilbert Scott [F.] on his election as a Royal Academician.

The following members attending for the first time since their election were formally admitted by the President:—Messrs. W. A. Cheers, Sidney C. Clark, G. H. Fielder, S. Hyde, R. J. H. Minty, C. A. Trimm, Associates.

Mr. S. C. Ramsey [F.] having read a paper entitled "London Clubs," a discussion ensued, and on the motion of the Rt. Hon. Lord Justice Warrington, Chairman of the Committee of the Athenæum, seconded by General Sir Henry MacKinnon, G.C.B., K.C.V.O., Chairman of the Committee of the Travelers' Club, a vote of thanks was passed to Mr. Ramsey by acclamation, and was briefly responded to.

The proceedings closed at 9.20 p.m.

R.I.B.A. JOURNAL.

N.B.—Dates of Publication.—1921: 12th, 26th November; 10th, 24th December. 1922: 14th, 28th January; 11th, 25th February; 11th, 25th March; 8th, 22nd April; 6th, 20th May; 3rd, 17th June; 15th July; 19th August; 23rd September; 21st October.



Report of the Council for the Official Year 1921-1922

SINCE the publication of the last Annual Report the Council have held 18 Meetings.
The following Boards and Committees appointed by the Council have met and reported from time to time on the matters referred to them :—

Annual Dinner Committee.
Board of Architectural Education.
Competitions Committee.
Conditions of Contract Committee.
Exhibition Joint Committee.
Fellowship Drawings Committee.
Fellowship Qualifications Committee.
Finance and House Committee.
Honorary Associates Committee.
London Building Acts Committee.

Maddox Street Property Committee.
National Housing Policy Joint Committee.
Office of Works Committee.
Royal Gold Medal Committee.
Selection and General Purposes Committee.
Sessional Papers Committee.
Street Architecture Jury.
Town Planning and Housing Committee.
Unification and Registration Committee and Sub-Committee.

Particulars of the work of these Boards and Committees are embodied in this Report.

Obituary. The losses by death have been as follows :—

FELLOWS.

Anderson : Sir Robert Rowand,
LL.D., F.R.S.E.
Ashlin : George C.
Briggs : Frank Gatley.
Connon : John Wreghitt.
Crickmay : George Lay.
Favarger : Henri, F.S.A.
Ford : George McLean.

Goldie : Edward.
Holman : Lieut.-Col. George Edward.
Hunt : Frederick William Hugh.
La Trobe : James Henry.
Littlewood : William Henry.
Monro : James Milne.
Newton : Ernest, C.B.E., R.A.

Notley : Robert Pledge.
Oldrieve : William Thomas, H.R.S.A.,
F.S.A. (Scot.).
Owen : Joseph.
Parker : John.
Phillips : John Henry.
Weatherley : William Samuel.

ASSOCIATES.

Barlow : William Tillott.
Buckley-Jones : James Alfred.

Roumieu : Reginald St. Aubyn.
Scott : William Alphonsus.

Smith : Thomas Marshall.
Trebilco : Arthur Floyd.
Walker : Hubert William.

LICENTIATES.

Bargman : Frederick.
Browne : Flint.
Cox : G. A.
Dyson : Ernest William.

Edlin : Vernon Annesley.
Emmett : Henry Alfred.
Fletcher : Edgar George.
Keech : Edward William.

Kirk : Walter.
Pope : Morley.
Stainer : Walter.
Sugden : William Hampden.
West : Charles.

HONORARY FELLOW.

Harcourt : Viscount The Rt. Hon. Lewis, P.C.

HONORARY CORRESPONDING MEMBERS.

Berner : Stanislas Louis (Paris).

Nyrop : Professor Martin (Copenhagen).

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Membership. The following table shows the Membership and Licentiateship of the Royal Institute compared with the preceding five years :—

	Fellows.	Associates.	Licentiates.	Hon. Fellows.	Hon. Associates.	H.C.M.	Ret. Fs.
1917	842	1,656	1,890	11	48	46	45
1918	838	1,631	1,882	11	45	46	41
1919	834	1,720	1,836	10	46	45	43
1920	863	1,773	1,715	11	44	41	43
1921	969	2,032	1,537	12	45	41	43
1922	969	2,214	1,487	12	45	38	45

During the official year since the last Annual General Meeting 33 Fellows and 224 Associates have been elected, as against 138 Fellows and 320 Associates in the previous year.

The Allied Societies. The membership of the Allied Societies, as shown in the last issue of the *KALENDAR*, now reaches a total of 3,790, including 1,341 Members and Licentiates of the Royal Institute. The membership of the Architectural Association is now 1,579, including 717 Members and Licentiates of the Royal Institute.

The Council have had the pleasure of admitting to alliance two newly formed Societies—the Berks, Bucks and Oxon Architectural Association, and the Norfolk and Norwich Association of Architects, which are already doing work of the utmost value to the profession in the four counties concerned.

Arbitrators. During the year the President has appointed the following members to act as Arbitrators in connection with building disputes :—

Mr. H. V. Ashley [F.].	Mr. James S. Gibson [F.].
Major Harry Barnes, M.P. [F.].	Mr. George Hubbard [F.].
Mr. A. C. Blomfield [F.].	Mr. J. J. Joass [F.].
Mr. Max Clarke [F.].	Mr. Arthur Keen [F.].
Mr. Horace Cubitt [A.].	Mr. H. D. Searles-Wood [F.].
Sir Banister Fletcher [F.].	Mr. John Slater [F.].
Mr. C. B. Flockton [F.].	

Assessors. Since the issue of the last Annual Report the following Assessors have been appointed on the President's nomination :—

North Wales Heroes' Memorial, Bangor—Mr. G. Gilbert Scott, R.A. [F.].
 Sanatorium in the Carse of Gowrie, Perth—Sir John Burnet, A.R.A. [F.].
 Harrogate War Memorial—Mr. Walter Cave [F.].
 Ipswich War Memorial—Mr. H. V. Ashley [F.].
 Hull Corporation Art Gallery—Mr. John W. Simpson [F.], Past-President.

Grants. Since the issue of the last Annual Report the Council have made the following grants :—

Architectural Association	£100 0 0	British School at Rome	£50 0 0
Architectural Association Endowment Fund	125 0 0	British Non-Ferrous Metals Association	10 0 0
Architects' Benevolent Society	100 0 0	British Engineering Standards Association	5 0 0
Architects' and Surveyors' Unemployment Society	25 0 0	Conjoint Board of Scientific Societies	20 0 0
Board of Architectural Studies, Cambridge	50 0 0	Empire Forestry Association	2 2 0

Royal Gold Medal. The Royal Gold Medal for Architecture for the year 1921 was awarded to Sir Edwin L. Lutyens, R.A. [F.], and was presented to him at the General Meeting on 20 June 1921. This year the Medal is to be awarded to Mr. Thomas Hastings, of New York, in recognition of the merit of his executed work. His Majesty has graciously signified his approval of the award.

Appointments. During the Session the Council have made the following appointments of members to represent the Royal Institute on the various bodies or for the purposes indicated :—

BRITISH ENGINEERING STANDARDS ASSOCIATION—Mr. Percival M. Fraser [F.].
 INDUSTRIAL COUNCIL FOR THE BUILDING INDUSTRY, ADMINISTRATIVE COMMITTEE—Mr. James S. Gibson [F.].
 PROFESSIONAL CLASSES AID COUNCIL—Mr. George Hubbard [F.].
 COURT OF GOVERNORS OF THE UNIVERSITY OF SHEFFIELD—Mr. J. Alfred Gotch [F.].
 GENERAL COUNCIL FOR THE NATIONAL REGISTRATION OF PLUMBERS—Mr. H. D. Searles-Wood [F.].
 CONFERENCE OF INTERNATIONAL UNION AGAINST TUBERCULOSIS—Mr. Edwin T. Hall [F.] and Mr. W. A. Pite [F.].
 STANDING COMMITTEE ON WATER REGULATIONS—Mr. H. D. Searles-Wood [F.].
 INSPECTION OF PUBLIC BUILDINGS COMMITTEE—Mr. E. Stanley Hall [F.] and Mr. H. T. Buckland [F.].
 INDUSTRIAL COUNCIL FOR THE BUILDING INDUSTRY—Mr. George Hubbard [F.].

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BRITISH ENGINEERING STANDARDS ASSOCIATION SUB-COMMITTEE RE IRON PORTLAND CEMENT—Mr. Max Clarke [F].
 REGISTRATION OF ELECTRICAL CONTRACTORS COMMITTEE—Mr. Alan E. Munby [F].
 COUNCIL OF SMOKE ABATEMENT EXHIBITION, 1922—Mr. Ernest Newton, R.A. [F].
 ROYAL BRITISH COLONIAL SOCIETY OF ARTISTS—Mr. W. E. Riley [F].
 SANITARY INSPECTORS' EXAMINATION BOARD—Mr. H. D. Searles-Wood [F].
 CONJOINT BOARD OF SCIENTIFIC SOCIETIES—Mr. H. D. Searles-Wood [F].
 UNIVERSITY OF LONDON ARCHITECTURAL EDUCATION COMMITTEE—Mr. Paul Waterhouse (President) and Mr. Arthur Keen [F].
 ROYAL SANITARY INSTITUTE CONGRESS, 1922, BOURNEMOUTH—Mr. H. D. Searles-Wood [F] and Mr. J. Arthur Smith [F].
 BRITISH ENGINEERING STANDARDS ASSOCIATION CONFERENCE ON STANDARDIZATION OF SAND LIME BRICKS—Mr. H. D. Searles-Wood [F].
 BRITISH SCHOOL AT ROME COUNCIL—Mr. John W. Simpson [F].
 COAL SMOKE ABATEMENT SOCIETY—Mr. W. G. Newton [A].
 KENWOOD PRESERVATION COUNCIL—Mr. Alan E. Munby [F].
 DEPUTATION TO ROYAL COMMISSION ON GREATER LONDON—Mr. Paul Waterhouse (President), Major Harry Barnes [F], Professor S. D. Adshad [F], Mr. W. E. Riley [F].

Sessional Papers.

The following Papers have been read since the issue of the last Annual Report :—

- "The Design of the Picture Theatre," by Mr. Robert Atkinson [F].
- "School Design," by Mr. George H. Widdows [F].
- "A Plea for a Broader Conception of Architectural Education," by Mr. Thomas E. Colclutt, *Royal Gold Medallist, Past President*.
- "Architectural Draughtsmanship," by Professor William Rothenstein, M.A., Principal of the Royal College of Art.
- "The Internal Decoration of the Ocean Liner," by Mr. Arthur J. Davis [F].
- "The Building Timbers of the Empire," by Mr. H. D. Searles-Wood [F].
- "London Clubs," by Mr. S. C. Ramsey [F].

The following Papers will be read before the end of the Session :—

- "The First Half-Century of the R.I.B.A.," by Mr. J. A. Gotch, F.S.A. [F] (to be read on 15 May).
- "Colour in Architecture," by Mr. William Harvey, Owen Jones Student 1913 (to be read on 29 May).
- "Recent Excavations at Rome," by Dr. Thomas Ashby.

The R.I.B.A. War Memorial.

The Memorial Tablet designed by Mr. Trenwith Wills [A.] will be completed and ready for unveiling early in the summer. The Tablet will contain the names of 232 Members and Students of the Royal Institute who laid down their lives in the service of the Empire during the War.

The R.I.B.A. Prizes and Studentships.

The Deed of Award of the various Prizes and Studentships was presented to the Royal Institute at the General Meeting on 23 January 1922. At the presentation of Prizes on 6 February an Address to Students was delivered by the President, and a criticism of the work submitted was read by Mr. Theodore Fyfe [F]. An Exhibition of the Drawings was held from 24 January to 6 February in the Royal Institute Galleries, and was visited by more than 550 persons. A selection of the Prize Drawings is now being sent the round of the Allied Societies.

The Henry Jarvis Studentships.

The Council have awarded Studentships of £50 each to the following ex-Service students :—

The Robert Gordon's Technical College, Aberdeen	Mr. T. A. G. Inglis.
The Board of Architectural Studies, Cambridge	Mr. A. W. White.
The Cardiff Technical College	Mr. E. C. R. Page.
The Edinburgh College of Art	Mr. William Sutherland.
University of Liverpool	Mr. J. H. Forshaw.
Victoria University, Manchester	Mr. Edwin Williams.
	Mr. R. A. Cordingley.

The Henry Jarvis Scholarship of £50 tenable at the Architectural Association was awarded to Mr. E. U. Channon [A].

The Henry Jarvis Studentship of £250 a year for two years tenable at the British School at Rome was awarded to Mr. E. W. Armstrong [A].

The Henry Jarvis Trust

The following statement has been received from the Trustees : "The capital, mostly invested in Colonial Government securities, was, on 31 December 1921, of the nominal value of £16,293 4s. 7d. The income received during the year 1921 (including income tax refunded) amounted to £539 18s. 9d. The income available for distribution at the end of 1921 was represented by a sum of £1,500, invested in 5 per cent. War Bonds, and a bank balance of £1,094 8s. 9d."

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The Archibald Dawnay Scholarships.

The scheme for the annual award of these Scholarships—two of £100 and one of £50—is now in operation, and it is hoped that the first holders will be selected in the course of the year.

The Inter- national Build- ing Trades Exhibition.

The Royal Institute has again co-operated with the Architectural Association and the Society in organising the Architects' Welcome Club for the benefit of Architects visiting the International Building Trades Exhibition at Olympia. The programme of the Club has been published in the JOURNAL for the information of members.

Alterations to R.I.B.A. Premises.

The great increase in the activities of the Royal Institute has necessitated certain alterations on the ground floor to provide more working space for the office. The Council Room has been sacrificed for this purpose, and rooms have now been provided for the Secretary and the Assistant-Secretary and the general office accommodation has been doubled. The Common

Room is now used for the fortnightly meetings of the Council. These alterations were carried out by Mr. Keen, the Hon. Secretary, to whom the thanks of the Royal Institute are due.

Architectural Education.

The Council desire to call the special attention of members to the Report of the Board of Architectural Education. On the election of Mr. Paul Waterhouse as President, Mr. W. Curtis Green has been elected Chairman of the Board. The activities and the influence of this body steadily increase and its relations with the Universities and Schools of Architecture are intimate and cordial. It is systematically fostering the establishment of a complete and co-ordinated system of architectural education throughout the whole Empire.

"Colour" Competition.

The assistance of the Council has been gladly granted to the conduct of a Competition to encourage the use of colour in external design, for which prizes amounting to £200 have been offered by an anonymous donor. The Assessors are :—

Sir Edwin Lutyens, R.A.
Mr. Thomas E. Colcutt, Past President.

Professor Gerald Moira.
Mr. William Walcott.

Great interest is being taken in the Competition, and the designs will be exhibited in the Galleries.

Unification and Registration.

On 12 May 1921 the Unification and Registration Committee held a largely attended meeting for the purpose of considering the report of the Sub-Committee. A full report of this meeting and of the decisions arrived at was published in the JOURNAL for 28 May 1921.

On 23 May 1921 the Council approved the four resolutions of the Unification and Registration Committee and entered into negotiations with the Society of Architects.

Before any decisive steps were taken it appeared to be advisable to ascertain the views of the members of the Associate class.

A general meeting of Associates was held on 7 June 1921, at which a Committee, subsequently strengthened by representative Associates from the Provinces, was formed. This Committee is giving the most careful consideration to the whole problem, and the Council's negotiations with the Society of Architects have been suspended until the Committee has reported. On 7 February 1922, at a Special General Meeting, a resolution was moved by Mr. A. W. S. Cross to the effect that there should be no alteration in the constitution of the Royal Institute until after the passing of a Registration Act. One hundred and twelve members voted in favour of the Resolution and sixty-six against. The By-laws require a two-thirds majority which was not obtained, and the Resolution was consequently not carried. A statement on the present position of the Unification and Registration movement was issued to members by the Council on 18 March.

Architects and the National Housing Scheme.

On 4 July 1921 the provisional agreement with the Ministry of Health on the subject of the fees payable to architects in connection with abandoned or partly abandoned Housing Schemes was rejected by the General Body. After consultation with housing architects, the Practice Standing Committee requested the Council to summon a General Meeting for the

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purpose of electing three delegates with full powers to negotiate a settlement with the Ministry of Health. This measure was approved by a General Meeting on 28 November 1921, and Mr. H. T. Buckland [F.], of Birmingham, Mr. Francis Jones [F.], of Manchester, and Mr. Herbert A. Welch [A.], of London, were duly elected as delegates of the Royal Institute. After fresh consultation between the Practice Standing Committee, the Housing Architects, and the delegates, a meeting with the Ministry of Health was arranged.

The delegates, accompanied by the President, were received at the Ministry on 22 March, and the negotiations are now going on.

Exhibitions of Architecture. Full use is now being made of the facilities which are afforded by the Galleries of the Royal Institute, and an interesting series of Exhibitions has been held during the last few months. In November and December 1921 it was intended to hold the first of a series of Annual Exhibitions of contemporary British Architecture. The arrangements for this Exhibition were well in hand when, through the instrumentality of Mr. Cart de Lafontaine, it was found that there was a possibility of obtaining a loan of the photographs and drawings of American Architecture which were shown in the Salon at Paris in the summer of 1921. With the courteous assistance of Mr. J. Clarence Levi, of the American Institute of Architects, who was in charge of the Exhibition in Paris, the consent of the A.I.A. was obtained, and it was decided to hold an Exhibition of American work in place of the British Exhibition that was being arranged. The Exhibition was opened by Lady Astor, M.P., on 23 November, and proved to be by far the most successful and the most interesting to the general public that had ever been held in the R.I.B.A. Galleries. It was seen by more than 3,000 visitors and was widely commented upon by the general Press. Advantage was taken of the opportunity to hold several meetings during the course of the Exhibition. On 25 November Mr. Bertram Goodhue and Mr. Donn Barber, of New York, delivered admirable addresses before a crowded audience; on 29 November Mr. Raymond Unwin lectured, under the chairmanship of Sir Aston Webb, on "American Architecture and Town Planning"; and on 2 December a large gathering of architectural students inspected the Exhibition and listened to informal discourses by Mr. A. D. Miller and others.

The American Exhibition was followed by the usual display of the Prize Drawings of the year. This was followed by a new departure—an Exhibition of working drawings of well-known buildings contributed by prominent members. Sir John Burnet, A.R.A., Mr. Ralph Knott, and Mr. A. J. Davis kindly lent the drawings of the British Museum Extension, the London County Hall, and the *Morning Post* building respectively. During the remainder of the Session it is intended to hold an Exhibition of Armenian Architecture, organised by Mr. A. Fetvadjian, and to show the Smithson and Webb drawings recently lent to the Royal Institute collection by Mrs. Coke and Sir Vere Isham, Bart. The beginning of the Session 1922-1923 will be marked by the first of the Annual Exhibitions of British Architecture.

London Street Architecture. The proposals for an annual award for the best street frontage of the year in the London area which were outlined by the late President, Mr. John W. Simpson, in his address to the Council (see JOURNAL, August 1919), have now taken shape. A Jury of Assessors, consisting of the President, Sir Aston Webb, P.R.A., Sir Reginald Blomfield, R.A., and Mr. E. Guy Dawber, Vice-President, under the Chairmanship of the Earl of Crawford and Balcarres [*Hon. Fellow*], has drawn up the conditions of the award, which are about to be published, and buildings completed within the year ending 31 December 1922 will, subject to the conditions, be reviewed by the Jury early in 1923. It is hoped that this Annual Award will do much to arouse public interest in fine work, and as soon as the system is established in London an effort will be made to extend it to the principal cities in the Provinces.

Finance. During the year 1921 the increase in the Annual Subscriptions and contributions, sanctioned in 1920, came into effect. It will be recalled that it was thought advisable to meet the general fall in the purchasing power of money by a uniform increase of 21s. in each class of subscription. The

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result has justified the forecast of the Finance and House Committee. As compared with the year 1914, the income of the Royal Institute has increased by roughly 50 per cent., and in spite of a general increase of prices, amounting to not less than 100 per cent., it has been possible to meet the cost of the greatly increased and constantly growing activities of the Royal Institute. Many expenses have had to be sanctioned which were not contemplated when the financial forecast of the year was made, but a great increase in Entrance and Examination fees has enabled these to be defrayed. This increase cannot be counted upon in future, and the expenditure for 1922 has been carefully reviewed by the Finance and House Committee so as to enable the necessary work to be carried on.

Addition to Premises. Thanks in the main to the energy and skill of Mr. Sydney Perks, the Chairman of the Committee, valuable and much-needed additions have been made to the property of the Royal Institute. The perpetually renewable lease of No. 10 Conduit Street was purchased for £11,000, and the premises have been let at £1,000 per annum. This purchase will enable the premises to be extended with a wider frontage when financial conditions permit. An area of some 850 feet on the Maddox Street side adjoining the Great Gallery has also been purchased for £3,000. This extension will allow an increase in the Great Gallery from 1,534 feet super to 2,684 feet super. The present Gallery has proved to be inadequate and in some respects unsatisfactory for the largely increased attendances at General Meetings.

Major Barnes, M.P. The Council have again to thank Major Barnes for his unfailing readiness to assist the efforts and to watch the interests of the profession in the House of Commons. His Parliamentary duties have naturally limited his attendance at afternoon meetings at the Royal Institute, but the Council have realised more fully than ever the value of his services to the profession.

Peace Day Garden Party. A Garden Party, which was attended by some 1,000 members and guests of the Royal Institute, was held on 28 June 1921 at the Zoological Gardens. The Council have to thank the Council of the Zoological Society for their courtesy in offering their hospitality to the Royal Institute, and they have also to thank certain private members whose generous donations for the Garden Party in 1920 enabled the function to be so successfully repeated in 1921.

Official Architecture. The Council have published in the JOURNAL for the information of Members certain extracts from the Report of the Official Architecture Committee (1915). The complete Report can be seen by members who apply to the Secretary.

The Institute of Scottish Architects. The Council have approved the draft of the proposed Charter of the Institute of Scottish Architects, and have written to the Privy Council in support of the petition. The grant of this Charter should be of the utmost benefit to the art of architecture in Scotland.

Payment of Examiners. On the recommendation of the Board of Architectural Education a scale of payment for the Royal Institute Examiners has been adopted.

A National Building Code. A Joint Committee, consisting of representatives of the Science and Practice Standing Committee, with power to co-opt other Members, has been appointed for the purpose of drafting a new National Building Code. It is hoped that such a Code, if embodied in a Bill, will receive the warm support of the Ministry of Health.

Conditions of Contract. A Conference attended by representatives of the Royal Institute, the Surveyors' Institution, the Quantity Surveyors' Association, the Society of Architects, the Institute of Builders, and the National Federation of Building Trades Employers, has been summoned for the purpose of preparing an agreed form of conditions of contract for the building trade for England and Wales. The

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Conference has requested the Government to appoint a neutral chairman to preside over a tribunal to which all points of difference that arise in the drafting of the Form are to be referred.

Professional Defence. The Practice Standing Committee having advised the Council not to proceed with the scheme for the foundation of a Professional Defence Union, it was decided to issue a statement to Members pointing out that they can protect themselves in this matter by taking out insurance policies from underwriters who undertake this form of business.

The Staff for Royal Engineer Services. The Council have made representations to the Secretary of State for War on behalf of the architects serving on the staff for R.E. services, and have urged that the pay and status of these officers should be materially improved.

Government Architects in India. The Council have been in communication with the Secretary of State for India and have made representations on behalf of the architects in the employment of the Government of India and of the Provincial Governments with the object of securing more satisfactory conditions of pay and status.

The Franco-British Union of Architects. The Council cordially welcome the formation of the Franco-British Union of Architects, which should be of the utmost service in establishing more intimate and friendly relations between the architects of the two countries.

"The Designers of Our Buildings." The publication of a volume, entitled "The Designers of Our Buildings," written by Mr. L. Cope Cornford as a gift to the Royal Institute, has been marked by a large number of very appreciative reviews in the Press generally. It is hoped that Members will purchase copies for their own use and for the information of their clients.

Higher Buildings for London. The action taken by the Council in the matter of the Report of the London Building Acts Committee has been fully reported in the JOURNAL. The General Meeting, which discussed the subject on 6 March, endorsed the Council's attitude by very large majorities.

The Royal Commission on Greater London. A Joint Committee, consisting of representatives of the Art, Practice, and Science Standing Committees, and the Town Planning and Housing Committee, has prepared a memorandum of evidence to be given on behalf of the Royal Institute to the Royal Commission. This evidence will be given in due course by the President, Major Harry Barnes, M.P., Professor S. D. Adshhead, and Mr. W. E. Riley.

The Allied Societies. During the past year the close touch between Members in the Provinces and the Metropolitan centre has been notably emphasized. The President has accepted invitations from and has been entertained by the South Wales Institute of Architects, the Northern Architectural Association, the York and East Yorkshire Architectural Society, the Hants and Isle of Wight Association of Architects, and the Bristol Society of Architects.

The Allied Societies have used the JOURNAL more freely for reporting their activities, and a system of regular interchange of information and ideas between the Societies has been arranged.

The Conferences of the Presidents of the Allied Societies have been systematized, and these meetings now take place in London three times a year. Steps have been taken to increase the number of Provincial Members on the Council and Standing Committees, and the Council's power of appointment to the Practice Committee has been employed to secure the presence of representatives of particular areas of the Kingdom.

Provincial Conferences. The first of the Annual Provincial Conferences was held at Liverpool on 24 and 25 June 1921, and was a brilliant success. Some 160 Members and guests took part. The Royal Institute owes a very special debt of gratitude to the Council and Members of the Liverpool Society for the energy and enthusiasm with which they organised the Conference, and to the civic authorities and

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the directors of the great commercial corporations whose hospitality contributed so largely to the success of the meeting. On the unanimous recommendation of the Presidents of the Allied Societies the Council have accepted the offer of the South Wales Institute of Architects to organise the Conference of 1922 at Cardiff, and it will be held there on 8, 9, and 10 June. It is hoped that a very large gathering of Members, both of the Royal Institute and of the Allied Societies, will make the journey to Cardiff.

The Annual Dinner. The coal strike made it necessary, at the last moment, to cancel the Dinner that was to have taken place in 1921.

The Dinner of 1922 will take place on 24 May, at Princes Restaurant, when it is hoped that a very large gathering of Members will be present. A large number of distinguished guests have already accepted the invitation of the Royal Institute.

The Organisation of the Building Industry. Four representatives of the Royal Institute, under the revised constitution of the Building Trades' Parliament, now take part in the deliberations of this body. It has accordingly been decided that it is no longer necessary to continue the work of the Building Industries Consultative Board.

Architects' War Relief Fund Committee. This Committee (of which Mr. H. D. Scarles-Wood is chairman), which administers the funds granted to the Architects' Benevolent Society by the Prince of Wales' Fund specially for war cases, has considered 27 cases during the year, and has made grants to those which were deserving, amounting to £1,111.

The R.I.B.A. Staff. The year has been marked by the retirement of the two oldest members of the staff, Mr. H. G. Tayler and Mr. George Northover. Mr. Tayler was a member of the permanent staff for no less than 47 years, while Mr. Northover had worked for the JOURNAL for some 26 years. Appropriate tributes to the value of the services of these two loyal officials have appeared in the columns of the JOURNAL.

Mr. Rudolf Dircks, who has been for 25 years the Librarian of the Royal Institute, has accepted the Editorship of the JOURNAL in succession to Mr. Northover, and he will in future combine the duties of Librarian and Editor.

Mr. H. Godfrey Evans, B.A. Cantab., late of the Rifle Brigade, has been appointed Assistant-Secretary, and Mr. Everard J. Haynes, B.A. Oxon., late of the Royal Horse Artillery, has been appointed Secretary of the Board of Architectural Education.

REPORT OF THE BOARD OF ARCHITECTURAL EDUCATION

Since the publication of the last Annual Report the Board have held 13 meetings.

Mr. W. Curtis Green was elected Chairman, in succession to Mr. Paul Waterhouse—whose election as President made it necessary for him to withdraw from his active work as an officer of the Board—Mr. Walter Cave and Mr. Maurice E. Webb were elected Vice-Chairmen, and Mr. Henry M. Fletcher Honorary Secretary.

Committee.—The following Committees of the Board were appointed:—Committee of Teachers, Examinations Committee, Problems in Design and Testimonies of Study Committee, Exemptions Committee, Examinations in India Committee, and Herbert Baker Scholarship Committee.

The arrangement of these Committees has been revised in order to secure greater efficiency; the Committee of Teachers and the Exemptions Committee remain as before, and a joint Committee has been formed to carry on the work of the Examinations Committee, Herbert Baker Scholarship Committee, and the Examinations in India Committee; the Problems in Design and Testimonies of Study Committee is composed of members of the Board acting by rota.

These Committees have met from time to time and have reported on the matters referred to them by the Board.

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Exemption from the Final Examination.—Exemption from the Final Examination, with the exception of the Examination in Professional Practice and provided that in judging all designs submitted for the Diploma or Degree there be two External Examiners—approved by the Council, with power of veto—has this year been granted to the following additional Schools which conduct five years' courses :—

- (i.) Glasgow School of Architecture. (Five Years' Diploma Course.)
- (ii.) London University, School of Architecture. (Five Years' Diploma and Degree Courses.)
- (iii.) Manchester University, School of Architecture. (Five Years' Degree and Post-Graduate Course. Five Years' Certificate Course.)

Special Exemptions from the Final Examination.—(A) Exemption from the Final Examination under the usual conditions has been granted to the holder of the Rome Scholarship at the conclusion of his three years' study abroad, and to the Henry Jarvis student after his two years' study abroad, their work having been approved.

(B) *École des Beaux-Arts, Paris.*—The Board have received authority from the Council to make recommendations in favour of exempting from all the qualifying Examinations for the Associateship, except the Examination in Professional Practice, British students in possession of the Diploma of the *École des Beaux-Arts, Paris*.

Exemption from the Intermediate Examination.—Exemption from the Intermediate Examination has been granted to the Armstrong College, Newcastle-upon-Tyne, on its Degree Course up to the Intermediate standard (*i.e.* after three years' full-time study).

The Probationership.—A revised form of application for registration as Probationer has been issued, and in future the only drawings necessary in support of an application for registration are examples of Freehand Drawing.

Publications.—The following pamphlets have been published :—

- (i.) *Membership of the R.I.B.A.*, containing full particulars of the qualifications for the Associateship.
- (ii.) *Advice to Candidates*, containing advice to the student of Architecture and a list of the books recommended for study.
- (iii.) *Past Examination Questions*, a pamphlet of the questions set at the Intermediate and Final (or Special) Examinations, June 1921.

There has been a heavy demand for these publications

Exhibition of Working Drawings.—It is proposed to hold annually an Exhibition of the Working Drawings of completed buildings for the guidance of students. For the Exhibition this year Sir John Burnet, A.R.A., Mr. A. J. Davis, and Mr. Ralph Knott have kindly lent the Working Drawings of the British Museum Extension, the *Morning Post* Building, and the London County Hall respectively. This Exhibition was greatly appreciated by Students and the junior Members of the Royal Institute, and it was found necessary to extend the hours during which the Exhibition was open.

Students' Evenings at the R.I.B.A.—Special Students' Evenings have been held in connection with the Exhibition of American Architecture, the Exhibition of Prize Drawings, and the Exhibition of Working Drawings. These evenings were very well attended by the Students. Several prominent Architects very kindly consented to be present to discuss with the Students the special points of interest in the different exhibits.

Problems in Design and Testimonies of Study.—210 Designs have been received and 133 have been approved. Arrangements have been made for exhibiting in the Galleries the successful designs submitted for as long a period as possible after each meeting of the Problems in Design and Testimonies of Study Committee.

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Advisory Members of the Board.—The Council have appointed the following Advisory Members of the Board :—

Professor Patrick Abercrombie, M.A., representing Liverpool University, Department of Civic Design, School of Architecture.
 Professor Adrian Berrington, representing Toronto University.
 W. H. Bidlake and H. T. Buckland, Birmingham.
 G. Washington Browne, representing the Edinburgh College of Art.
 Professor R. W. Cable, representing the Bombay School of Art.
 C. de Gruchy, representing the Royal Academy Architectural School.
 Professor Percy Nobbs, representing McGill University, Montreal.
 Professor E. S. Prior, M.A., A.R.A., F.S.A., representing Cambridge University.
 Professor Ramsay Traquair, representing McGill University, Montreal.
 Professor Leslie Wilkinson, representing Sydney University.
 L. S. Sullivan, representing the Society of Architects.
 Rev. Arthur Chilton, D.D., City of London School
 C. H. Green, M.A., School House, Berkhamsted } representing the Conference of Head-masters.
 E. Fiander Etchells, F.Phys.Soc., etc., representing the Concrete Institute.

Copies of all the publications have been circulated to the Advisory Members for their information and comment.

Education in South Africa.—The Council have empowered a Board, consisting of the Council of the Cape Institute of Architects and of the Authorities of the University of Cape Town, to supervise the registration of Probationers, this Board reporting their proceedings to the Board of Architectural Education.

The Board are in communication with the University of Cape Town with reference to the foundation of a Chair of Architecture in that University.

Education in Canada.—For some time past the Board have been in communication with the Universities of McGill and Toronto with reference to exemption from the Royal Institute Examinations. This matter is still under consideration.

Communication has also been held with the Allied Societies in the Dominions with the idea of establishing an Intermediate Examination, or its equivalent, overseas. The correspondence with reference to this question is not yet completed.

The Examinations.—During the year 191 Candidates for the Probationership have furnished the Board with satisfactory evidence of their attainments and have been registered as Probationers.

The Intermediate, Final, and Special Examinations.—The Intermediate Examination has been held once in London, once in Manchester, and once in Sydney. The Final and Special Examinations have been held once in London and once in Sydney.

The following table gives the results of the Examinations :—

				Exempted.	Examined.	Passed.	Relegated.
INTERMEDIATE EXAMINATION—London . . .				31	35	13	22
"	"	Manchester . . .		—	11	3	8
"	"	Sydney . . .		—	2	2	—
				31	48	18	30
				Exempted.	Examined.	Passed.	Relegated.
FINAL AND SPECIAL EXAMINATIONS—London . . .				—	21	9	12
"	"	Sydney . . .		—	1	1 Part A only.	—
				—	22	10	12

49 Students have therefore been added to the Register during the year, and 10 candidates have passed the Final or Special Examination qualifying for Associateship.

Special War Examination and Special War Exemption.—The Special War Examination has been held twice in London and once in Liverpool, Sydney, and Toronto ; 272 candidates presented themselves, of whom 217 passed.

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Of the Students who have availed themselves of the Special War Exemption from the Final Examination, 11 have been elected Associates.

At the Statutory Examination qualifying for candidature as District Surveyor in London 2 candidates were examined and 1 passed.

The Council, on the recommendation of the Board, tender their grateful acknowledgments to the Examiners for their services.

The Board have authorised the Council of the Cape Institute of Architects to conduct a Special War Examination in Cape Town in June 1922.

Arrangements have also been made for holding a Special War Examination in Bombay, India.

Prizes and Studentships.—The Board appointed Juries to assess the designs submitted in competition for the Prizes and Studentships. The Board have reported thereon to the Council, and the Award was published in the JOURNAL for 28 January 1922.

The Board have appointed a Sub-Committee to consider alterations in the machinery for the administration of the Prizes and Studentships. This Sub-Committee has met twice and the recommendations have been approved.

The arrangements now in force for drawing up the Programmes and assessing the Drawings submitted are the outcome of suggestions offered by several practising Architects, Professors, Teachers, and Students. The revised Prizes pamphlet should do much to ensure a large entry in the Competitions.

Cambridge School of Architecture.—The Council have made a donation of £50 to the funds of the School. This sum has been doubled by a club recently formed among Architects who are Cambridge men, with a view to helping the Cambridge School of Architecture.

University of Melbourne.—The Board are in communication with the University of Melbourne with reference to a proposed Chair of Architecture at that University.

R.I.B.A. Problems in Design.—Designs prepared in the Royal Academy Ateliers and in the "Recognised" Schools may now be submitted for approval by candidates for admission to the Final Examination in lieu of the same number of R.I.B.A. Problems in Design.

Archibald Dawson Scholarships.—These are three Scholarships, two of £50 per annum for two years and one of £25 per annum for two years, offered for competition between the Students of the "Recognised" Schools. They are intended to encourage the advanced study of construction. An explanatory circular has been issued and distributed to the "Recognised" Schools. The scheme will come into operation in June 1922.

Exhibition of Designs Executed at Schools Recognised for Exemption from the Final Examination.—It has been arranged to hold this Exhibition annually in the middle of July.

A Special Meeting of the Board will be held to inspect these Designs.

REPORT OF THE ART STANDING COMMITTEE

Eleven meetings have been held since the issue of the last Annual Report. The following officers were elected to serve during the session :—

<i>Chairman</i>	..	..	..	..	..	Mr. Walter Tapper.
<i>Vice-Chairman</i>	..	..	..	..	..	Mr. Halsey Ricardo.
<i>Hon. Secretaries</i>	..	..	..	..	..	Mr. Maurice E. Webb, Mr. W. A. Forsyth.

The year has been one of considerable activity, many interesting questions having been dealt with by the Committee.

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Medal for Street Architecture.—This proposal, which originated from the Streets Committee, was eventually approved by the Council in a somewhat modified form on the recommendation of the Art Committee, to whom it had been referred for their views on the composition of the Jury and other points in the original proposals.

Visits.—A beginning was made with a series of visits to buildings of interest to architects. Both at the new London County Hall and Whiteley Village many members took advantage of the privilege afforded to them by the authorities and architects concerned. This year visits have been arranged to Somerset House, Hampton Court, St. George's Chapel, Windsor, Greenwich Hospital, the Bush Building and the Port of London Authority Headquarters. In the case of the two latter buildings definite dates will be settled when the architects consider the most interesting time has arrived to see the buildings.

Cathedrals.—Anxiety was caused by a widespread rumour that the Office of Works were endeavouring to get all the Cathedrals of England into their charge under the Ancient Monuments Act. Inquiries were made from the cathedrals, and a list of the architects responsible for their fabrics is now available for the information of members in case of further developments.

Nicholas Hawkesmoor's Tomb.—The Council agreed, on the recommendation of the Committee, to put Nicholas Hawkesmoor's tomb into a state of repair and to give a record of his career to the Parish of Shenley, in whose churchyard he is buried.

Diocesan Advisory Committees.—The Committee have been asked to support the Diocesan Advisory Committees in the work they are endeavouring to do in advising upon the repair of the fabrics of our churches. Agreement has not yet been reached as to the best way in which the Institute can help them, but later it is hoped that a definite recommendation can be laid before the Council.

Higher Buildings.—The Committee's report upon this subject has been published and endorsed by the Council and, later, by a general meeting of members.

Arterial Roads.—The formation of new roads and the widening of old roads throughout England are beginning to cause general complaints in the Press of destruction of architectural features or rural amenities. Definite cases which have been brought to our notice have been dealt with, but on investigation have not up to date proved particularly well founded. An appeal to members for information from their districts has elicited little or no response. The Society for the Protection of Ancient Buildings have brought forward several cases, which we are dealing with in conjunction with them. It should be remarked that it is too late to say anything after the damage is done, so if our members know of damage likely to be done, the attention of the Institute should be drawn to it now, and not afterwards.

Street Architecture.—During a rebuilding of a large frontage in Oxford Street an opportunity occurred to improve the frontage line. The Art Committee were asked to assist in the interest of London architecture. The Borough Council concerned met the Committee most willingly, and agreed to the principle of what appeared to be a reasonable settlement of a difficult problem. Unfortunately the building owners did not see it in that light, and an opportunity of civic improvement has been lost. This case is mentioned, as it seems to indicate the need of laying down frontage lines in great cities with due regard to the appearance of the streets, as well as the wishes of the freeholder, who should, on taking a new building lease, know what his liabilities are in this regard.

Threatened Buildings.—Various cases of threatened demolitions have been brought to the Committee's notice, amongst others St. Paul's, Covent Garden, and Whitgift Hospital. No definite action was required, as their destruction in the near future was not to be anticipated.

Ancient Monuments.—A list of ancient monuments transferred to the Office of Works and those which are Crown and War Department property was obtained and handed to the Editor of the JOURNAL for publication to Members. The Committee hope that the Allied Societies will report any cases of reparation in their district, with comments upon the methods employed.

REPORT OF THE LITERATURE STANDING COMMITTEE

Nine meetings of the Committee have been held since the issue of the last report.

The following officers were elected to serve during the Session : Mr. H. M. Fletcher, Chairman ; Mr. W. Curtis Green, Vice-Chairman ; Mr. J. Alan Slater and Mr. W. H. Ward, Hon. Secretaries.

Public Lectures.—A very successful series of Public Lectures was held in the Galleries of the R.I.B.A. during April, May, and June, and from the size and enthusiasm of the audience the Committee feel that they were justified in recommending that this series should be held, and are arranging for a further course during the coming spring.

It was hoped that the lectures would be published and offered for sale, and a sub-Committee appointed for this purpose dealt fully with the matter and obtained estimates and publishers' opinions as to the probable success of the publication. The Finance Committee, however, were unwilling to undertake the financial risk involved, and the matter was abandoned, much to the Committee's regret.

A further series is in process of arrangement, and Mr. D. S. Maccoll, Professor Reilly and Mr. Halsey Ricardo have intimated that they will be pleased to deliver addresses.

The Technical Lectures, mentioned in last year's report, were abandoned owing to unforeseen difficulties.

Library Accommodation.—Recommendations of the Committee with regard to the re-housing of the Library in more suitable premises were considered by the Council, but the matter was postponed owing to the probability of the Institute obtaining increased accommodation in No. 10, Conduit Street.

As the acquisition of these premises does not appear, however, to have increased the actual accommodation of the Institute itself, the Committee feel justified in again pointing out both the inadequacy of the present space allotted to the Library and the serious risk involved in keeping the most valuable architectural library in the world in a building which is dangerously exposed to risk of fire.

The Committee hope that if any opportunity occurs of adding further to the premises of the Institute the claims of the Library will not be overlooked.

Architectural Survey of England.—A small Committee is working at the present time on the question of an Architectural Survey of England. This Committee has only recently been appointed, and no definite report has yet been furnished.

Corresponding Members and Sessional Papers.—The Committee, at the request of the Council, have submitted names of Hon. Corresponding Members, and have also suggested various subjects for papers for next Session.

The R.I.B.A. Journal.—Mr. Northover, who has for many years been the hard-working and much-esteemed Editor of the R.I.B.A. JOURNAL, has resigned during the Session. The Literature Committee have expressed their admiration for Mr. Northover and his work for the Institute in a Testimonial bearing the names of the Members of the Committee serving during the past ten years.

While regretting the resignation of Mr. Northover, the Committee welcome Mr. Dircks, the Librarian, who has been appointed to succeed him as Editor, and hope that the new appointment will tend to establish in future a still closer connection between the Committee and the Institute's chief publication.

The following is the Librarian's Report to the Committee :

During the twelve months ending 31 March of the present year 191 volumes and 52 pamphlets have been added to the Library, exclusive of periodicals, reports and transactions of societies, and parts of works issued in serial form.

The number of works presented was 27 volumes and 9 pamphlets.

Works purchased numbered 164 volumes and 43 pamphlets, of which 53 volumes were added to the Loan Library.

The attendance of readers in the Reference Library numbered 7,836.

The number of books issued on loan was 3,754.

The number of tickets issued for admission to the Library, other than to members of the Institute or to Students and Probationers, was 166.

The number of books issued through the post was 340.

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Among the works presented or purchased during the present year may be mentioned : *American Competitions*, Vol. 3 : Ashbee's *Jerusalem*, 1918-1920 ; Baldwin-Brown's *Arts in Early England*, Vol. 5 ; Bégule's *Les vitraux du moyen âge et de la renaissance dans la région Lyonnaise* ; Blomfield's *History of French Architecture from 1661-1674*, 2 vols. ; Collignon's *Le Parthénon* ; Combrement's *La sculpture de l'église de Brou* ; Contet's *Documents de ferronnerie ancienne époques Louis XV et Louis XVI*, Series 5 ; Crossley's *English Church Monuments* ; Delafosse's *Iconologie historique* ; Ducher's *Devantures de boutiques*, 2nd edition ; Edward's *The Things which are Seen* ; *Encyclopædia Britannica*, 11th edition ; Fletcher's *History of Architecture*, 6th edition ; Garnier's *Les grands travaux de la ville de Lyons* ; Hambidge's *Dynamic Symmetry—the Greek Vase* ; Hool and Johnson's *Building Construction*, 2 vols. ; Ivekovic's *Dalmatian Architecture*, 5 vols. in 4 portfolios ; London Society, *London of the Future* ; Magonigle's *Architectural Rendering in Wash* ; Marolois' *Œuvres mathématiques traitans de geometrie, perspective et fortification*, 1625 ; Mayer's *Architektur und kunstgewerbe in Alt-Spanien* ; Munby's *Laboratories* ; Paris, *Ecole Nationale Des Beaux Arts, Prix de Rome designs*, 1914, 1919, 1920 ; Reau's *L'art Russe, des origines à Pierre le Grand* ; Redalob's *Alt-Dänemark* ; Rodocanachi's *Les monuments de Rome* ; Searles-Wood and Adams, *Modern Buildings* ; Serlio, books 3 and 4, translated by Pierre van Aelst, 1551 ; Tipping's *English Homes Norman to Plantagenet and Early Georgian*, 2 vols. ; Vacquier and Contet's *Les vieux hôtels de Paris*, vol. xiii ; Ventura's *Particolari di architettura classica Architettura Greca—Romana—Bizantino—Lombarda—Gotica—Cinquecento—Seicento—Settecento* ; Vignola, *Regola delli cinque ordini d'architettura*, fo. Siena, 1555 ; Weller's *Athens and its Monuments* ; Webb's *Records of St. Bartholomew's Priory and of the Church of St. Bartholomew the Great, West Smithfield*, 2 vols. ; Woodfall's *Landlord and Tenant*, 20th edition ; Wood's *Law and Practice with regard to Housing in England and Wales*.

The following donations have been received during the year : *Japanese Temples and their Treasures*, presented by Mr. G. Kiralfy ; *National Memorial to H.R.H. the Prince Consort*, presented by Mr. E. J. Burt, M.Inst.C.E. ; Serlio's *Reigles Generales d'Architecture* (translated into French by Pierre van Aelst, published in Paris in 1551) ; Malcolm's *Manners and Customs of London*, and Merigot's *Views in Rome*, presented by Mr. J. E. Yerbury, Lic. R.I.B.A. ; *The Church of Our Lady of the Hundred Gates in Paros*, presented by the Byzantine Research Fund ; Lund's *Ad Quadratum*, presented by the publisher, B. T. Batsford ; Neuwirth and others, *K.K. Technische Hochschule in Wien, 1815-1915*, presented by Baron Max von Ferstel ; *Examples of Scottish Architecture from Twelfth to Seventeenth Centuries*, presented by the National Art Survey of Scotland ; Houvet's *Sculptures of Chartres Cathedral*, presented by Mr. T. F. Colcutt, Past President ; Sullivan's *Art of Illustration*, presented by Major L. Sylvester Sullivan.

The Misses Alma Tadema have presented the Working Drawings of Sir L. Alma Tadema's House in Grove End Road, St. John's Wood, many of which were drawn by Sir Alma Tadema ; and Mr. L. P. Butterfield has presented the Indentures of Apprenticeship of his uncle, the late William Butterfield.

REPORT OF THE PRACTICE STANDING COMMITTEE

The Committee have held eight meetings since the beginning of the Session. The attendance of Members at meetings of the Committee, exclusive of Sub-Committee meetings, has been as follows:—

No. of Attendances				No. of Attendances			
Ashley, Henry V. [F.]	..	..	8	Cubitt, Horace [A.]	..	..	8
Clarke, Max [F.]	..	..	5	Emerson, H. V. M. [A.]	..	..	5
Cross, A. W. S. [F.]	..	..	—	Scott, J. Douglas [A.]	..	..	7
Forrest, G. Topham [F.]	..	..	2	Solomon, Digby L. [A.]	..	..	5
Keen, Arthur [F.]	..	..	2	Welch, Herbert A. [A.]	..	..	6
Lovegrove, G. H. [F.]	..	..	7	Teather, H. [F.]	..	..	5
Peach, C. Stanley [F.]	..	..	3	Savage, Rupert [F.]	..	..	2
Perks, Sydney [F.]	..	..	5	Jones, Francis [F.]	..	..	8
Slater, John [F.]	..	..	8	Milburn, T. R. [F.]	..	..	5
White, W. Henry [F.]	..	..	7	Collard, A. O. [F.]	..	..	7
Cockrill, G. Scott [A.]	..	..	8				

The officers of the Committee are : Chairman, Mr. John Slater, B.A. [F.] ; Vice-Chairman, Mr. T. R. Milburn [F.] ; Hon. Secretaries, Messrs. Horace Cubitt [A.] and Herbert A. Welch [A.]. The two Sub-Committees dealing with (a) Housing, and (b) Charges and Contracts, have been continued, and have proved indispensable to the proper fulfilling of the work of the Committee. The officers of the Sub-Committees are : Housing Sub-Committee—Mr. Sydney Perks [F.], Chairman, and Mr. Herbert A. Welch [A.], Hon. Secretary ; Charges and Contract Sub-Committee—Mr. W. Henry White [F.], Chairman, and Mr. J. Douglas Scott [A.], Hon. Secretary.

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Housing Fees.—The troublesome question of housing fees for abandoned, or partly abandoned, work has received the continuous attention of the Committee. A large number of Members have from time to time been advised as to their action in regard to outstanding fees for this work, pending a satisfactory conclusion of the negotiations between the Institute and the Ministry of Health. The Committee have been in close touch with the delegates appointed by the general body of Members to conduct the negotiations with the Ministry, and are in hopes that a decision on this subject will be reached very shortly.

New Housing Committee.—The Committee, on being requested by the Council to give their views on a suggestion that a special Housing Committee should be formed, reported in favour of the proposal. They understand that the new Committee will shortly be constituted, and that its membership will include representatives of the Practice Committee and of the Town Planning Committee, in addition to other Members.

R.I.B.A. Certificate Book.—As a result of the work of the Committee, principally during the last Session, a Certificate Book is now among the publications of the Institute. A good many copies of the book have been already sold, and it is hoped that, as Members exhaust their existing supply of certificates, they will commence the use of the Institute certificate form. It is considered by the Committee that, in the eyes of the public, the standing both of individual Members and of the Institute as a whole will be improved by the use of a form bearing the *cachet* of the Institute.

Proposed Architects' Defence Union.—A considerable amount of time has been devoted to the question of a proposed Defence Union for the profession. The Committee, however, have reluctantly come to the conclusion that the difficulties in the way of the launching of a scheme are, at the present time, too great to admit of a reasonable prospect of success. Therefore, no attempt is being made to proceed further with the scheme. In their investigation of this question the Committee were approached by a member of Lloyd's, who obtained the permission of the Council to circularise Members with a view to getting the support of a sufficient number to justify him in quoting insurance rates for the covering of architects against actions for damages.

Architects and Engineer Pay in the Army.—On the recommendation of the Committee the War Office has been requested by the Council to modify the Army Pay Regulations so as to include the qualification "Associate R.I.B.A." among those entitling the holder to receive engineer pay. In making this recommendation the Committee advised that the attention of the War Office should be drawn to the services rendered by Members of the Institute during the war in the Corps of Royal Engineers.

Fees Allowed by Queen Anne's Bounty.—On the receipt of complaints as to the inadequacy of the scale of fees allowed by Queen Anne's Bounty Office, the Committee recommended the Council to take up this matter with a view to getting the Institute Scale accepted. As a result of the Committee's action a new scale has been issued by the Q.A.B. Office. Unfortunately, however, the Committee were not consulted by the Q.A.B. Office in the drafting of the new scale, and although the new scale is a distinct improvement on the old one, it is in several respects unsatisfactory. The Committee are therefore in communication with certain Members familiar with work financed from Q.A.B. funds with a view to considering whether any further useful action can be taken.

Fees Allowed by Licensing Authorities.—As a result of a complaint by an Allied Society that the fees allowed by the Licensing Authorities in their area are entirely inadequate, the Committee have communicated with all the Allied Societies with a view to ascertaining the fees generally allowed throughout the country for this work. On the receipt of this information the Committee will endeavour to obtain the raising of fees in those districts where the allowances are below the average.

Clause 15 of Scale of Charges.—The attention of the Committee having been called to the difficulty experienced by some Members in applying Clause 15 of the Institute Scale of Charges to all the varying

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conditions encountered in dealing with dilapidations, Mr. W. Gillbee Scott, the Hon. Secretary of the original Scale of Charges Committee, was asked to draft a detailed explanation of the Clause. Mr. Gilbee Scott was good enough to do this. The draft was duly approved by the Committee and published in the JOURNAL of April 1922.

Use of Canadian Spruce.—On the receipt of a letter from the Advisory Committee on Timbers asking for the reasons for the rather prevalent objections to the use of Canadian spruce for building work, the Committee instituted inquiries in various directions. As a result they were able to forward to the Advisory Committee expressions of opinions from Members and others to the effect that there is no objection to specifying Canadian spruce for carcasing above the ground-floor, joisting, flooring, and general joiner work.

Proposed Pamphlet on the Services of Architects.—The attention of the Committee has been called to the issue of pamphlets by certain architectural societies in the United States and in Canada setting forward the services that can be rendered by architects, and explaining how clients can be of assistance to their architects in putting their requirements clearly and definitely before them. The Committee have come to the conclusion that a pamphlet of this nature might with advantage be issued by the Institute, and, having obtained the Council's approval to the general principle, they have appointed a special sub-Committee to prepare a draft of the proposed pamphlet.

Professional Conduct, Charges, etc.—The Committee have, as usual, dealt with certain cases in which complaints have been made by one architect against another. The Committee also, through the most valuable activities of the Charges and Contracts Sub-Committee, have given advice to a considerable number of Members as to the fees that they should charge under certain specified circumstances. About one-half of the time of the Committee has been occupied in dealing with cases under these two headings, and the confidential nature of the cases, of course, precludes any detailed reference to them. Wherever the circumstances warrant it the Committee are anxious to inform the general body of Members of their decisions, and, through the medium of the JOURNAL, have done so in several cases during the past Session. But much of the work of the Committee does not admit of this publicity.

Architects and Speculative Building.—Various letters have appeared recently in the professional Press suggesting that the Institute should approach the builders' organisations with a view to the services of architects being properly utilised when housing again becomes a commercial enterprise. The Committee already had this question on their agenda for consideration, when they received an instruction from the Council to consider and report on it. At the meeting when the Committee dealt with this question they had the benefit of the attendance and views of Mr. Manning Robertson [A.], whose special experience on the subject was of considerable value to the Committee. After careful consideration it was decided to recommend the Council to get into touch with the builders' organisations with a view to a general discussion on the subject. It is hoped that decisions will ultimately be arrived at which will increase the opportunities of the profession in a relatively new sphere of usefulness.

REPORT OF THE SCIENCE STANDING COMMITTEE

Since the date of the last Annual Report of the Science Standing Committee the number of meetings held has been 11, including the special meeting held at the Experimental Station of the Building Research Board at Acton. The average attendance was 10·2.

The Officers were elected as follows :—H. W. Burrows, A.R.I.B.A., F.G.S. (Chairman), H. D. Searles-Wood, F.R.I.B.A. (Vice-Chairman); J. Ernest Franck, F.R.I.B.A., Henry A. Saul, F.R.I.B.A. (Hon. Secs.).

Research Work.—The Committee have now the advantage of the help of the Building Research Board of the Scientific and Industrial Research Department in investigations into the problems which arise in the practice of our profession.

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The Committee have received from Mr. H. O. Weller, the Director, Building Research Board, the notes on the Consistency of Concrete which are published in this issue of the JOURNAL.

It is hoped that these notes will be followed by a further series, together with diagrams of a simple apparatus which will enable tests to be made on the works by the Architect or Clerk of Works.

The Committee have in view an apparatus which can be constructed at little cost and so enable members to conduct tests on the smaller works which may be under their supervision and without the more costly tests which would now be required to obtain the required information.

The Annual Report of the Committee of the Privy Council for Scientific and Industrial Research, together with a copy of the Report of tests on tow and jute substitutes for ox hair in plaster, have been placed in the Library.

This latter report has been supplied by Mr. H. O. Weller, and the Committee take this opportunity of making acknowledgment to him for his assistance in the foregoing and other matters.

In the Annual Report of last year the Committee gave an outline of the work of the Atmospheric Corrosion Research Committee, which was instituted as a result of the work of the Research Committee appointed by the Council of the Royal Institute of British Architects.

The Interim (*not* "Annual") Report of the Atmospheric Corrosion Research Committee has now been placed in the Library. Further research is proceeding and the Final Report will be issued after approval by the British Non-Ferrous Metals Research Association and the Department of Scientific and Industrial Research.

Building Stone Tests.—The Science Standing Committee are now able to state that the preliminary report containing the conclusions to be drawn from data obtained from the tests will be printed in the JOURNAL.

A copy of the full report and the series of photographs is about to be placed in the Library of the Royal Institute of British Architects.

The stones will still remain under test at the Geological Museum and will be available for inspection by members of the Institute after previous request in writing.

Fuel Economy and Smoke Abatement.—The Science Committee wish to draw the attention of members of the Institute to the final report of the Departmental Committee on Smoke and Noxious Vapours Abatement appointed by the Ministry of Health, and more particularly to Sections 5 and 6 of such report.

Disease in Timber.—Further specimens have been received by the Science Committee and the information obtained is now the subject of deliberations with the Authorities at South Kensington.

The Committee obtained through the good offices of Sir Frank Baines the consent of his Board to the publication of the Report on the Repairs to the Westminster Hall Roof, together with photographs and drawings illustrating the wood boring beetle.

This report, together with the photographs and drawings, are about to be published in the JOURNAL.

The Committee are of opinion, and judging by the numerous enquiries received on this subject, that the publication of this Report will be of interest to the members of the Institute.

The subject of wood-boring insects in tropical and other countries is likewise under investigation by the Committee.

Defective Roof Tiles.—The Chairman of this Committee prepared a preliminary report on this subject, published in the JOURNAL, 9 May 1921, and a Sub-Committee has been appointed to deal further with the matter.

The preparation of microscopic sections of tiles is now in progress, and whilst any definite conclusion must await the results of tests conducted over a period of years, it is hoped to publish Interim Reports in the JOURNAL.

Supporting Power of Sub-Soils.—This subject has been under the consideration of the Committee, who have appointed a Sub-Committee to collect information and make researches in this matter.

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Building By-laws.—The Science Standing Committee have considered the question of Building By-laws as at present constituted.

The Committee find that the present Building By-laws are in themselves opposed to the science of building ; that under existing Building By-laws there is no incentive for manufacturers or inventors to improve on existing methods and materials ; that as the relaxation of Building By-laws under section (25) of the Housing, Town Planning, etc., Act 1919 expires in July of this year, it is desirable to establish a new building code for the encouragement of science in building.

The Science Committee decided to ask the Practice Standing Committee to appoint members to a Joint Committee to consider the whole subject.

This Joint Committee has been formed consisting of four members from each of the Practice and Science Standing Committees of the Royal Institute of British Architects, with power to co-opt other members.

The question of the revision of By-laws in Sanitation has been placed before the Science Standing Committee by the Council and this matter will also be dealt with by the Joint Committee on Building By-laws.

Home Office Regulations.—The Secretary of State is about to make certain Regulations to apply to Buildings in course of construction, alteration or repair under Section 79 of the Factory and Workshop Act 1901.

The proposed Regulations have been considered by the Science Committee, who are of opinion that there are certain objections to the Regulations and have suggested to the Council of the Royal Institute of British Architects that representation be made to the Secretary of State.

The Council have communicated with the Secretary of State, who has stated that he will be glad to receive and consider any representations which the Royal Institute of British Architects may wish to make.

The Science Standing Committee will be pleased to receive any communications from members who are interested in the proposed Regulations.

Air Map of England.—The Science Committee have been consulted by the Air Ministry as to the characteristic architectural and building features of the various counties of England.

The Chairman of the Committee undertook to prepare a preliminary memorandum giving this information for some typical counties in England, but after a certain amount of work had been done by him a communication was received from the Air Ministry stating that on account of necessity for reduction in public expenditure the matter would remain in abeyance for the present.

Capt. Riall Sankey's Testing Machine.—The Science Committee suggested and arranged the exhibition of Capt. Riall Sankey's testing machine held at the Institute on 6 June 1921.

The Science Committee hope to arrange for other demonstrations of a similar character, and also for the publication of further reports other than those already mentioned.

The Science Committee feel that such demonstrations and the accurate and adequate testing by scientific methods of the problems which may arise in the practice of architecture will be of assistance to all our members.

REPORT OF THE TOWN PLANNING AND HOUSING COMMITTEE

Sir Aston Webb, P.R.A., was again elected Chairman of the Committee, Professor S. D. Adshead [F.] and Mr. Walter Cave [F.] Vice-Chairmen, the Hon. Secretaries being Mr. W. R. Davidge [F.] and Mr. C. H. B. Quennell [F.].

Town Planning Regulations.—The Town Planning Regulations issued by the Ministry of Health were considered in detail by the Committee, who are in close touch with the Ministry of Health upon the

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matter. The Committee are of the opinion that it would be desirable that Members should notify the Secretary R.I.B.A. of any town planning schemes in contemplation that come within their knowledge.

The Future of Housing.—A special report on this subject was prepared for the Committee by Mr. F. M. Elgood [F.], and certain recommendations have been made to the Council regarding the future of the National Housing Scheme which are still under consideration. In order to co-ordinate the work of the Royal Institute on Housing questions, it is proposed to form a new Housing Committee, which will be composed of members of the Practice Standing Committee and of the Town Planning and Housing Committee and of additional members appointed by the Council.

Reconstruction in France.—The Committee have been in touch with "La Renaissance des Cités," a French organisation which is doing valuable and instructive work in connection with the rebuilding of the areas devastated in the war.

Civic Survey Diagrams.—In order to make more widely available for reference the valuable work carried out by the Civic Survey Committee during the war, the diagrams of the Greater London area are housed in the New County Hall, under the charge of the London County Council. Those of the South Yorkshire area are in the possession of the City Corporation of Leeds, and the South-East Lancashire diagrams are deposited with the Manchester and District Joint Town Planning Advisory Committee.

Height of Buildings in London.—The Committee submitted a report to the Council with reference to the recommendation of the London Building Act Committee upon this question. Attention was drawn to the necessity for some relation between the height of buildings and the width of streets. The Committee expressed the opinion that the permissive powers of the London County Council were sufficiently wide, and supported the Minority Report of Mr. Arthur Keen. The Council, and afterwards the General Body, finally decided that any increase of the general height of buildings in London was undesirable. It is also the opinion of the Committee that a comprehensive Zoning Plan should be prepared for London.

Royal Commission on Greater London.—At the request of the Council the Committee have examined in detail the lines of evidence to be given by a deputation of the Royal Institute before the Royal Commission, and they urge the necessity of the preparation of a plan and the importance of the establishment of a Planning Authority to lay down a general scheme of development. The work of the Committee in this matter received the approval of the Standing Committees and of the Council; a deputation has been appointed to give evidence to the Royal Commission on the lines suggested, and will be introduced by Sir Aston Webb.

The New Federal Capital of Australia.—The attention of the Committee has been drawn to the present position with regard to the new city of Canberra, Federal Capital of Australia, from which it appears to have been decided that the important buildings are to be of a temporary nature only. The subject is still under consideration.

REPORT OF THE COMPETITIONS COMMITTEE

Since the publication of the last Annual Report the Committee has met on 9 occasions. The attendance of Members of the Committee during the Session has been as follows:—

No. of Attendances				No. of Attendances			
Ansell, W. H.	..	..	4	Pigott, R. M.	..	..	4
Ashley, Henry V.	..	..	9	Pite, William A.	..	..	5
Elkington, G. Leonard	..	..	4	Rees, T. Taliesin	..	..	1
Guthrie, L. Rome	..	..	3	Scott, J. Douglas	..	..	8
Keen, Arthur	..	..	2	Warwick, Septimus	..	..	5
Lanchester, H. V.	..	..	2	Welch, Herbert A.	..	..	8
Newman, F. Winton	..	..	7	Wilson, W. G.	..	..	9

The Officers of the Committee are as follows: Chairman, Mr. W. G. Wilson [F.]; Vice-Chairman, Mr. H. V. Lanchester [F.]; Joint Hon. Secretaries, Mr. Henry V. Ashley [F.] and Mr. Herbert A. Welch [A.].

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The Committee regret the resignation of Mr. H. S. East, who left England in June 1921, and who served for some years on the Committee. The Committee regret also the unavoidable absence on business in India during part of the year of the Vice-Chairman, Mr. H. V. Lanchester, whose invaluable assistance has been much missed.

During the Session the Committee have dealt with 38 Competitions. In 7 cases the conditions were considered satisfactory; in 8 cases the conditions were revised to the satisfaction of the Committee. In 5 cases, after correspondence with the promoters, the Committee decided that no useful purpose could be served by taking action. In 11 cases the Council banned the Competitions on the recommendations of the Committee. In 2 cases the Competitions were withdrawn on a preliminary warning being issued, and in 1 case the Committee decided that the Competition was sculptural rather than architectural, and therefore took no further action.

In another Competition, after the Assessor's award had been accepted, the promoters decided that the architects whose design had been placed first by the Assessor were not in a position to carry out the work. The promoters further decided not to appoint the architects whose design was placed second by the Assessor. The Committee thereupon made representations to the promoters, resulting in the authors of the design placed second being appointed architects to carry out the work. Three Competitions are still subject to negotiation with the promoters.

Ottawa Government Building Competition.—On the recommendation of the Committee the Council of the R.I.B.A. voted 100 guineas to brief counsel in Canada to represent them in the action between the competitors and the Canadian Government. The Committee were gratified to learn that the moral effect produced in Canada was considerable, and that the support of the R.I.B.A. was much appreciated by the Allied Society in the Dominion.

The six architects who were "placed" in the first stage of the Competition had taken action against the Dominion Government because they had failed to fulfil that part of the contract which provided for the second stage of the competition, and had abandoned the project.

The judge held that the architects were entitled to the premiums provided for in the first stage only of the Competition, and held further that the war and its after effects were sufficient causes to justify the Dominion Government in not proceeding further with the Competition.

Auckland War Memorial Competition.—The action of the New Zealand Institute of Architects, in conjunction with the R.I.B.A., in negotiating with the promoters and securing the amendment of the conditions of this Competition is regarded by the Committee as satisfactory. Subsequent developments, however, in particular regarding Answers to Questions, leave much to be desired. At the date of this report the R.I.B.A. is pressing the promoters to extend the date for sending in designs.

Powers of Assessors.—The Committee desire attention to be called to the great importance of correlating the proposed outlay with the amount of accommodation required by promoters of Competitions. It is considered that Assessors should do more towards bringing this to the notice of promoters.

The attention of Assessors is also called to the desirability of arranging for the exhibition of Competition drawings, and of using their utmost endeavours with promoters that reasonable time and opportunity be given to all competitors to view the drawings, and of competitors being always formally advised of the results of Competitions.

Allied Societies and Competitions.—Of particular interest to Allied Societies is the action recently taken by one of them in banning a local Competition. Disciplinary measures were found necessary in the case of a Member of this Allied Society, and the support of the Council of the R.I.B.A. was obtained on the recommendation of the Competitions Committee.

Joint Sub-Committee.—A Joint Sub-Committee has been formed of Members of the Committee and Representatives nominated by the Society of Architects, which has under consideration the preparation of a report upon Premiums, Regulations for and Conduct of Architectural Competitions, and other matters.

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Income and Expenditure Account of Ordinary Funds for the Year ending 31st December, 1921.

Dr.	EXPENDITURE.		Exclusive of Subscriptions in advance.		INCOME.		Cr.
To ORDINARY EXPENDITURE—	£	s.	d.	£	s.	d.	
Rent	75	10	9				
Rates and Taxes	1220	11	5				
Interest on Mortgage	193	16	8				
				1490	4	16	
Gas and Electric Lighting		295	7				
Fuel		73	1				
Salaries		5838	3				
Gratuities to retiring Officials		750	0				
General Printing, Stationery, Stamps and Petty Expenses		2786	11				
General Meetings and Exhibitions		344	8				
Housekeeping and Wages		396	1				
Advertisements		64	12				
Examiners' and Moderators' Fees		154	1				
Structural Alterations and General Repairs		905	1				
Fire Insurance		52	11				
Medals and Prizes		56	3				
Grants—							
Architectural Association	100	0	0				
Architectural Association Endowment Fund	125	0	0				
British School at Rome	53	3	0				
Architects' Benevolent Society	100	0	0				
Conjoint Board of Scientific Societies	20	0	0				
British Non-ferrous Metals Association	70	0	0				
				408	3	0	
Library				354	3	2	
JOURNAL—							
Reporting	52	17	8				
Printing and Binding	2305	17	0				
Illustrations	196	2	6				
Postages and Carriage	873	2	2				
				3427	19	4	
KALENDAR—							
Printing	616	19	1				
Postage and Carriage	83	7	9				
				700	26	10	
Contributions to Allied Societies†				899	2	0	
MISCELLANEOUS EXPENSES—							
Presidents of Allied Societies	139	5	8				
Council Dinner Guests	129	18	9				
Legal and Accountants	292	17	5				
Stamp Duty and Registration Fee re Purchase No. 10, Conduit Street	126	12	0				
Stamp Duty, Registration Fee and Law Costs re Mortgage, 10, Conduit Street	129	1	0				
American Exhibition	176	12	1				
"The Designers of our Buildings"	204	0	0				
Liverpool Conference	190	11	8				
Garden Party	127	0	10				
Expenses re Annual Dinner	25	16	1				
Office of Works Committee	113	10	0				
Building Exhibition, Olympia	58	17	6				
Ottawa Competition	105	0	0				
Compensation, Loss of Drawings	105	0	0				
Public Lectures	42	0	0				
Hawkesmoor Tomb Restoration	10	0	0				
Industrial Council Building Industry	14	5	9				
Telephone Charges	35	16	5				
Bank Interest	9	0	11				
Sundries	283	0	2				
				2279	9	6	
Annual Charge for Fine payable at Renewal of Lease				7	0	0	
Surplus for year				375	4	5	
				£21607	15	6	

† By-Law 82 provides that "The Royal Institute shall, in each year, contribute to any Non-Metropolitan Allied Society not more than one-fourth of the annual subscription paid to the Royal Institute by each member thereof who is also a member of such Society, in respect of and for his subscription thereto; but in no event shall such contribution apply in the case of any one member to more than one Allied Society."

SAFFERY, SONS & CO.,
Chartered Accountants.

Examined with the vouchers and found to be correct. 20th March 1922. { JOHN HUDSON [F.] } Hon. Auditors.
{ ARTHUR W. SHEPPARD [A.] }

Dr.	LIABILITIES.		Balance Sheet of Ordinary Funds 31st December, 1921.		ASSETS.		Cr.
To Sundry Creditors—	£	s.	d.	£	s.	d.	
Sundry	2220	8	5				
Mortgage Interest	73	16	8				
Rent	23	0	0				
				2926	5	7	
Mortgages on Properties—							
At 4 per cent.	4000	0	0				
At 6½ per cent.	10000	0	0				
				14000	0	0	
Subscriptions received in Advance				388	9	0	
Lieutenant Francis Grissell Legacy Fund War Memorial—				500	0	0	
Donations received	155	2	0				
Fees paid	70	0	0				
				85	2	0	
Surplus of Assets over Liabilities (subject to valuation of premises and Realisation of Debtors and Subscriptions in arrear)				72127	12	2	
				£59427	8	9	

NOTE.—A fine of 17 per annum is payable in respect of 9, Conduit Street, under a Lease from the Corporation of the City of London. Notice of renewal must be given at Michaelmas, 1925, and the fine for 14 years of £98 paid.

SAFFERY, SONS & CO.,
Chartered Accountants.

Examined with the vouchers and found to be correct. 20th March 1922. { JOHN HUDSON [F.] } Hon. Auditors.
{ ARTHUR W. SHEPPARD [A.] }

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Revenue Accounts of Trust Funds for the Year ending 31st December, 1921.

Dr.				Cr.
ASHPITEL PRIZE FUND:—	£ s. d.			£ s. d.
To Balance carried forward.....	16 16 6		By Balance from last Account.....	4 0 2
			By Dividends and Interest received.....	12 16 4
	<u>16 16 6</u>			<u>16 16 6</u>
ANDERSON AND WEBB FUND:—	£ s. d.			£ s. d.
To Balance carried forward.....	48 6 7		By Balance from last Account.....	24 12 1
			By Dividends and Interest received.....	23 14 6
	<u>48 6 7</u>			<u>48 6 7</u>
ARTHUR CATES LEGACY:—	£ s. d.			£ s. d.
To Balance carried forward.....	86 6 8		By Balance from last Account.....	44 3 0
			By Dividends and Interest received.....	42 3 8
	<u>86 6 8</u>			<u>86 6 8</u>
ARCHIBALD DAWSON REQUEST:—	£ s. d.			£ s. d.
To Amount paid for Law Costs.....	23 12 6		By Balance at 31st December 1920.....	219 3 7
To Purchase of £544 19s. 7d. 2½ per Cent. Consols.....	271 16 6		By Interest received during the year.....	165 1 2
To Balance carried forward.....	88 15 9			
	<u>384 4 9</u>			<u>384 4 9</u>
DONALDSON TESTIMONIAL FUND:—	£ s. d.			£ s. d.
To Cost of Medal.....	2 10 0		By Balance from last Account.....	0 4 10
			By Dividends and Interest received.....	0 19 0
	<u>2 10 0</u>		By Balance carried forward.....	1 6 2
				<u>2 10 0</u>
DONATION FUND:—	£ s. d.			£ s. d.
To Balance carried forward.....	20 18 5		By Balance from last Account.....	17 2 3
			By Dividends and Interest received.....	3 16 2
	<u>20 18 5</u>			<u>20 18 5</u>
GODWIN BURSARY:—	£ s. d.			£ s. d.
To Amount paid to C. B. Pearson [F.].....	32 10 0		By Balance from last Account.....	28 7 11
To Amount paid for Medals.....	3 5 0		By Dividends and Interest received.....	31 9 10
To Balance carried forward.....	24 2 0			
	<u>59 17 9</u>			<u>59 17 9</u>
GRIBBELL LEGACY:—	£ s. d.			£ s. d.
To Balance from last Account.....	2 0 9		By Dividends and Interest received.....	13 7 3
To Balance carried forward.....	10 17 6			
	<u>13 7 5</u>			<u>13 7 5</u>
OWEN JONES STUDENTSHIP:—	£ s. d.			£ s. d.
To Balance carried forward.....	198 7 8		By Balance from last Account.....	94 18 4
			By Dividends and Interest received.....	103 9 4
	<u>198 7 8</u>			<u>198 7 8</u>
PUGIN MEMORIAL FUND:—	£ s. d.			£ s. d.
To Amount paid for Medal.....	2 2 0		By Balance from last Account.....	6 6 1
To Amount paid to H. St. J. Harrison [A.] (balance).....	30 0 0		By Dividends and Interest received.....	36 12 8
To Balance carried forward.....	10 16 9			
	<u>42 18 9</u>			<u>42 18 9</u>
SAXON SNELL REQUEST:—	£ s. d.			£ s. d.
To Balance carried forward.....	60 5 4		By Balance from last Account.....	32 15 6
			By Dividends and Interest received.....	27 9 10
	<u>60 5 4</u>			<u>60 5 4</u>
THE LEGACY FUND:—	£ s. d.			£ s. d.
To Amount paid to Gordon Holt, 1st Instalment.....	70 0 0		By Balance from last Account.....	2 8 6
			By Dividends and Interest received.....	25 7 0
	<u>70 0 0</u>		By Balance carried forward.....	42 4 6
				<u>70 0 0</u>
WIMPERIS REQUEST:—	£ s. d.			£ s. d.
To Amount paid to C. B. Pearson [F.].....	32 10 0		By Balance from last Account.....	19 19 2
To Balance carried forward.....	29 15 10		By Dividends and Interest received.....	33 6 8
	<u>61 5 10</u>			<u>53 5 10</u>
HENRY BAKER SCHOLARSHIP FUND.....			By Balance as last Account.....	62 10 0
HENRY JARVIS STUDENTSHIP ACCOUNT.....			By Balance as last Account.....	47 1 0
HENRY JARVIS EX-SERVICE TRAVELLING STUDENTSHIPS ACCOUNT:—	£ s. d.			£ s. d.
To Amount paid to 12 Students.....	540 0 0		By Amount received from Trustees.....	540 0 0
	<u>540 0 0</u>			<u>540 0 0</u>
SAFFERY, SONS & CO., Chartered Accountants.				

Examined with the vouchers and found to be correct. 29th March 1922. { JOHN HUDSON [F.] } Mon. Auditors.
{ ARTHUR W. SHEPARD [A.] }

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Balance Sheet of Trust Funds, 31st December, 1921.

Dr.		Cr.	
TO ASSHTELL PRIZE FUND:—			
Capital—£305 1s. 8d. New South Wales 4 per Cent. Debentures (1922).....	£ 305 1 8		
Revenue Investments—			
£78 8s. 11d. 4½ per Cent. War Loan	64 4 3		
£20 5 per Cent. War Loan	18 8 0		
£10 5 per Cent. National War Bonds	9 14 0		
£20 4 per Cent. Funding Loan	15 4 0		
Balance at credit of Revenue Account	16 16 6		
		£20 8 5	
TO ANDERSON AND WEBB FUND (Board of Architectural Education):—			
Capital—£394 18s. 4d. New South Wales 4 per Cent. Debentures (1922)	394 18 4		
£55 6s. New South Wales 4 per Cent. Inscribed Stock (1942)	41 7 1		
Revenue Investments—			
£58 6s. 4d. 4½ per Cent. War Loan	47 6 4		
£25 5 per Cent. War Loan	23 0 0		
£30 4 per Cent. Funding Loan	22 16 0		
£25 4 per Cent. National War Bonds	24 0 0		
£10 5 per Cent. National War Bonds	10 2 0		
Balance at credit of Revenue Account	48 6 7		
		811 16 4	
TO ARTHUR CAYEY LEGACY FUND:—			
Capital—£1,160 North Eastern Railway 4 per Cent. Preference Stock	777 4 0		
Revenue Investments—			
£137 18s. 7d. 4½ per Cent. War Loan	115 17 3		
£50 4s. 11d. 5 per Cent. War Loan	46 4 7		
£100 5 per Cent. National War Bonds	89 0 0		
Balance at credit of Revenue Account	86 6 8		
		1124 12 7 6	
TO ARCHIBALD DAWNEY BEQUEST:—			
Capital—£11,026 17s. 9d. 2½ per Cent. Consols	5600 0 0		
Revenue Investment—			
£544 19s. 7d. Consols	271 16 6		
Balance at credit of Revenue Account	83 15 9		
		5860 12 3	
TO DONALDSON TESTIMONIAL FUND:—			
Capital—£72 London and North Western Railway 4 per Cent. Consolidated Preference Stock	40 13 7		
Revenue Investment—			
£12 4s. 7d. 4½ per Cent. War Loan	10 5 5		
	59 19 0		
Balance at debit of Revenue Account	1 6 2		
		56 12 10	
TO DONATION FUND:—			
Revenue Investments—			
£78 8s. 11d. 4½ per Cent. War Loan	64 4 3		
£40 5 per Cent. War Loan	36 16 0		
400 War Savings Certificates	310 0 0		
Balance at credit of Revenue Account	20 18 5		
		431 18 8	
TO GODWIN BURSARY FUND:—			
Capital—£1,080 Caledonian Railway 4 per Cent. Debenture Stock	741 12 0		
Revenue Investments—			
£25 5 per Cent. War Loan	23 0 0		
50 War Savings Certificates	38 15 0		
£40 5 per Cent. National War Bonds	39 4 0		
Balance at credit of Revenue Account	24 2 9		
		866 13 9	
TO GRISSELL LEGACY FUND:—			
Capital—£20 0s. 8d. "B" Annuity G.I.P. Railway	300 0 0		
Revenue Investments—			
£20 7s. 8d. 4½ per Cent. War Loan	17 2 5		
£20 5 per Cent. War Loan	18 8 0		
£30 5 per Cent. National War Bonds	29 8 0		
Balance at credit of Revenue Account	10 17 6		
		573 15 11	
TO OWEN JONES STUDENTSHIP FUND:—			
Capital—£2,128 Midland Railway 2½ per Cent. Debenture Stock	1000 3 2		
£1,247 Great Western Railway 5 per Cent. Consolidated Guaranteed Stock	1109 10 7		
Revenue Investments—			
£398 16s. 8d. 4½ per Cent. War Loan	335 0 5		
£44 6s. 4½ per Cent. War Loan	37 4 3		
£107 0s. 6d. 5 per Cent. War Loan	98 17 6		
50 War Savings Certificates	38 15 0		
£40 5 per Cent. National War Bonds	39 4 0		
£75 4 per Cent. National War Bonds	72 10 0		
Balance at credit of Revenue Account	198 7 8		
		2029 19 7	
Carried forward		£12859 0 3	
			£18240 12

JOURNAL OF THE ROYAL INSTITUTE OF BRITISH ARCHITECTS

BALANCE SHEET OF TRUST FUNDS—continued.

Dr.		£	s.	d.		Cr.			
	Brought forward	12889	9	3		Brought forward	16240	12	3
TO PUGIN MEMORIAL FUND:—									
Capital—£1,070 London and North Western	£	s.	d.						
Railway 4 per Cent. Consolidated Preference Stock	738	6	0						
Revenue Investments—									
£15 9s. 9d. 4½ per Cent. War Loan	13	0	3						
£47 16s. 5 per Cent. War Loan	43	19	7						
£50 4 per Cent. Funding Loan	38	0	0						
£40 5 per Cent. National War Bonds	39	4	0						
Balance at credit of Revenue Account	10	16	9						
				888	6	7			
TO SAXON SNELL BEQUEST:—									
Capital—£998 4s. New Zealand 3½ per Cent.	£	s.	d.						
Stock	902	14	1						
Revenue Investments—									
£294 10s. 4d. 4½ per Cent. War Loan	171	16	0						
£56 14s. 4d. 5 per Cent. War Loan	52	3	9						
£40 5 per Cent. National War Bonds	39	12	0						
Balance at credit of Revenue Account	60	5	4						
				520	11	2			
TO TITE LEGACY FUND:—									
Capital—£1,130 2½ per Cent. Consols	£	s.	d.						
Stock	573	0	0						
Revenue Investments—									
£51 12s. 6d. 4½ per Cent. War Loan	43	7	4						
£61 4s. 6d. 5 per Cent. War Loan	56	6	6						
£30 5 per Cent. National War Bonds	29	10	0						
	704	3	10						
Balance at debit of Revenue Account	42	4	0						
				661	19	4			
TO WIMPERIS BEQUEST:—									
Capital—£1,024 15s. 8d. Metropolitan Water	£	s.	d.						
Board 3 per Cent. "B" Stock	573	19	3						
Revenue Investments—									
£202 3s. 6d. 4½ per Cent. War Loan	169	16	5						
£71 14s. 4d. 5 per Cent. War Loan	63	19	5						
£40 5 per Cent. National War Bonds	39	4	0						
Balance at credit of Revenue Account	20	15	10						
				869	14	11			
TO HENRY JARVIS SCHOLARSHIP	47	1	0						
TO HERBERT BAKER SCHOLARSHIP	62	10	0						
				£16240	12	3			
							£16240	12	3

SAFFERT, SONS & CO.,
Chartered Accountants.

SAFFERT, SONS & Co.,
Chartered Accountants.

Examined with the vouchers and found to be correct. 22nd March 1922. JOHN HUDSON [F.]
ARTHUR W. SHEPARD [A.] Hon. Auditors.

The Council submit a rough Estimate of Income and Expenditure of Ordinary Funds for the year ending 31st December, 1922:—

ORDINARY EXPENDITURE.			ORDINARY INCOME.		
	£	s. d.		£	s. d.
Rent, Rates and Taxes, &c.	2275	0 0	Subscriptions, Fees, and Arrears	14800	0 0
Gas and Electric Lighting	200	0 0	Entrance Fees	500	0 0
Fuel	65	0 0	Sale of Publications	900	0 0
Salaries	5165	0 0	Advertisements	1075	0 0
Staff Pensions and Gratuities	825	0 0	Examination Fees	2500	0 0
General Printing, Stationery, Stamps and Petty Expenses	2700	0 0	Use of Rooms	1250	0 0
General Meetings and Exhibitions	350	0 0	Dividend on Ormsell Legacy	50	0 0
Housekeeping and Wages	400	0 0	Interest on Deposit Account	50	0 0
Advertisements	70	0 0			
Examiners' and Moderators' Fees	150	0 0			
General Repairs	400	0 0			
Fire Insurance	90	0 0			
Medals and Prizes	225	0 0			
Grants	475	0 0			
Library	350	0 0			
The JOURNAL	3000	0 0			
The KALENDAR	520	0 0			
Contributions to Allied Societies	950	0 0			
Presidents of Allied Societies	150	0 0			
Legal and Accountants	120	0 0			
Miscellaneous, including the following:					
President's Portrait	210	0 0			
Annual Exhibition	200	0 0			
Conditions of Contract Conference	200	0 0			
Council Dinner Guests	150	0 0			
Unification Committee	100	0 0			
R.I.B.A. War Memorial	450	0 0			
Telephone	50	0 0			
Cardiff Conference	200	0 0			
Annual Dinner	100	0 0			
Paris Exhibition	50	0 0			
Architects' Welfare Club	60	0 0			
Sundries	350	0 0			
	2120	0 0			
Estimated Surplus	795	0 0			
	£21895	0 0			

JOURNAL OF THE ROYAL INSTITUTE OF BRITISH ARCHITECTS

REPORT OF THE HON. AUDITORS FOR 1921

We have carefully examined the books and checked the various items therein with the accounts and vouchers for the year 1921. We have also examined the various share certificates held by the Institute and the list of share and script certificates deposited at the Bank, all of which were found to be in order and to agree with the balance sheet prepared by the Accountants.

It is interesting to note that the income for 1921 amounted to £21,607 15s. 6d., which includes entrance fees amounting to £1,496 and an increase in the examination fees of £805, leaving a surplus for the year of £375 4s. 5d. In 1920 the income amounted to £14,447 13s. 3d., with a deficit for the year of £1,008 os. 1d., thus showing the necessity for the increase in the amount of subscriptions.

We note that No. 10 Conduit Street, purchased by the Council for £11,000, has been let at £1,000 per year exclusive of rates and repairs, which must be considered very satisfactory.

In view of the extension to the Institute property it is suggested that the Council should endeavour to obtain the freehold of the rear portion of No. 11 Conduit Street, which is held on a lease for about 80 years at a rental of £55 per annum.

Another point to be noted is that a Contract has been entered into with regard to advertisements in the JOURNAL; a minimum fee of £950 will be received for the first year and £1,250 for each succeeding year, in all, the contract to remain in force for five years.

It is also observed with satisfaction that the Trust Fund securities on 31 December 1921 have increased in value by £867.

We should like to repeat that the work has been excellently carried out in the best interests of the Institute and we again congratulate the Staff on the way they have performed their duties.

JOHN HUDSON [F.].

ARTHUR W. SHEPPARD [A.].

THE FINANCES OF THE ROYAL INSTITUTE

The financial statement appended to the Report of the Council, together with the report of the Hon. Auditors, who make an independent investigation into the affairs of the Royal Institute, will enable members to appreciate the financial position.

The rough estimate of Income and Expenditure for the year ending 31 December 1921 has been considerably exceeded on both sides of the balance sheet, and there is a realised surplus of £375 as against an estimated surplus of £970. Large expenditure proved to be necessary under several heads that were not contemplated when the Estimate was prepared. The retiring gratuities for Mr. Tayler and Mr. Northover, the expenses in connection with the acquisition of No. 10, Conduit Street, the cost of remodelling the ground floor of No. 9, the American Exhibition, and other unforeseen items, had all to be provided for, and a year of exceptional activity in all directions caused a great increase in printing, stationery and postage. The income, however, also increased in a remarkable way, and enabled us to end the year with the realized surplus referred to above. The Special War Examination comes to an end in December, and there will probably be a large reduction in Examination Fees in consequence. The influx of new members will probably also be reduced, and it is not safe to calculate on an income of more than £21,395 in the current year. If the Estimate for the year proves to be correct we shall end with a surplus of some £700.

The purchase of No. 10, Conduit Street and of the land on the Maddox Street side not only provides room for much-needed expansion in the future, but materially adds to the value of the premises as a whole.

SYDNEY PERKS,

Chairman Finance and House Committee.

The Consistency of Concrete

By H. O. WELLER, DIRECTOR OF BUILDING RESEARCH (DEPARTMENT OF SCIENTIFIC AND INDUSTRIAL RESEARCH; BUILDING RESEARCH BOARD).

IT is reported that, after listening to his elders discussing things for three days at the recent annual meeting of the American Concrete Institute, a young engineer from Cleveland remarked: "Well, by gosh! I don't think that anybody knows anything about concrete." This decision was hasty, but the young engineer had some grounds for his despair. In England the position is little better: some people would say it was worse. So far as mathematical investigation goes, quite enough has been done; it is in practice that our work is so unsatisfactory. Is it too much to say that no two people a hundred miles apart, even using the same materials, could be certain of making each a six-inch block of cement concrete that would have crushing strengths equal within 5 per cent.? Yet our calculations for ferro-concrete structures assume that the concrete is a material of the same order of certainty as steel.

It will be generally admitted that one of the chief factors governing the strength of cement concrete is the amount of water used in gauging. For this reason, at the Building Research Station it was decided, before any work was done on cement and concrete, that the consistency of mixtures used would always be noted, and that an endeavour would be made to work out a few tests for consistency and standard consistencies which, if generally adopted, would not only make it more possible for experimenters to make comparable concrete, but for architects and engineers to make concrete specifications more definite. Incidentally cement would be used more economically, because there is little doubt that our standard mixtures for most purposes give a concrete too rich in cement though often by no means too high in quality.

The following is a short account by Mr. Comben, engineer-in-charge, of the first steps taken in this matter at the Building Research Station.

In mixing cement mortars in a laboratory the most important factors under control appear to be the time taken, the temperature of the air, and the amount of water used in gauging. It is found that if fairly skilled operators take five minutes in mixing, and the temperature of the laboratory is kept comfortably constant, results vary consistently with the amount of gauging water used.

The curve (Fig. 1) between Tensile Strength, after 7 days, and the percentage of gauging water for a normal Portland cement shows a variation in strength (per sq. inch) of over 200 lb., and as any of the mortars containing between 24 per cent. and 30 per cent. water might

be termed "plastic" within the meaning of Section 10 of the B.S.S. for Portland cement, it will be seen that some more rigid standard for the quantity of mixing water is required, especially where different types of cement are being compared.

The method adopted at the Building Research Station, Acton, is to mix all cement mortars for 5 minutes and to adjust the water content until the mortar is of standard consistency as measured by the flow-table in the manner described below.

THE FLOW-TABLE.

The flow-table in use at Acton was made up from a description, with photograph, given in *Concrete* for August 1921, the description being taken from the *Proc. Am. Soc. T.M.* for June 1921; the photograph (Fig. 2) shows the apparatus. It consists of a flat circular metal plate mounted on a vertical shaft, capable of being raised and dropped suddenly by the rotation of the cam fixed to the shaft at right angles below. The fall can be varied from $\frac{1}{2}$ inch to $1\frac{1}{2}$ inches by moving a pin to the vertical shaft, but the $\frac{1}{2}$ inch fall is normally used for neat cement and standard sand mortars.

METHOD OF USE.

(A) Neat Cement Mortars.

The mortar is mixed for 5 minutes and then filled into the cylindrical brass mould (80 mm. diam. by 40 mm. high) that is used for the Vicat Setting Time Test (see Fig. 2 below the table).

The mould is transferred to the flow-table, after which plate and mould are carefully removed and the table is given 30 bumps at the rate of one per second; the plastic mortar flows out to a new circle, the diameter of which is measured—then the consistency is taken

as the ratio = $\frac{\text{Diam. after Slump}}{\text{Diam. before Slump}} \times 100.$

Where the same mould is always used the new diameter is a direct measure of the consistency, so that in the laboratory a "Seven-inch Slump" is taken as standard, where 7 inches is the diameter of the mortar after bumping.

In commencing tests of a new cement the quantity of water to bring 1 lb. of the cement to this standard consistency is found by trial, and afterwards the same proportion of water is always added to this brand of cement, but the consistency is checked for each mix.

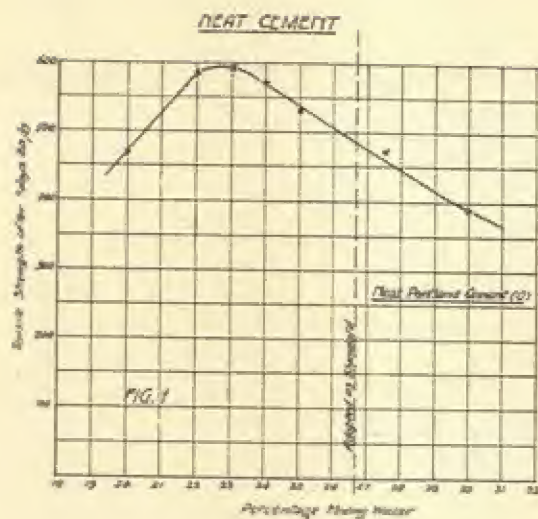


FIG. 1

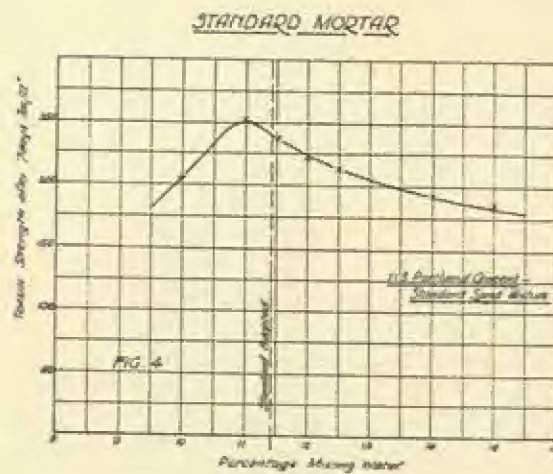


FIG. 4

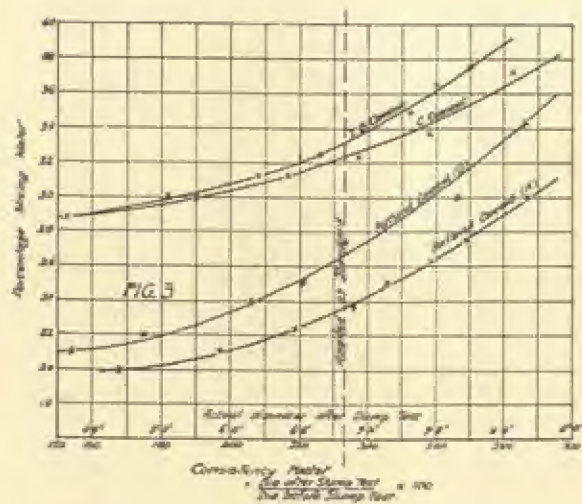


FIG. 3

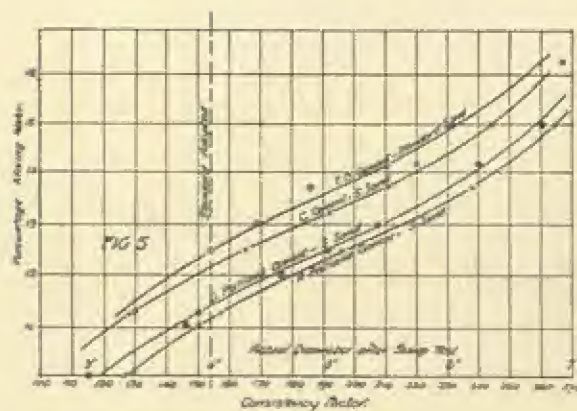


FIG. 5

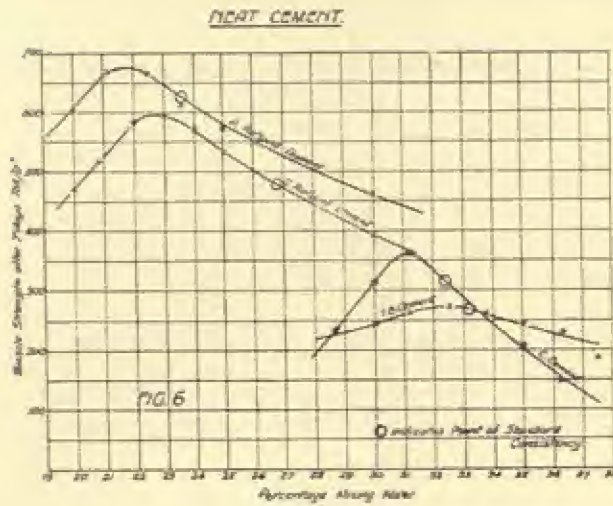


FIG. 6

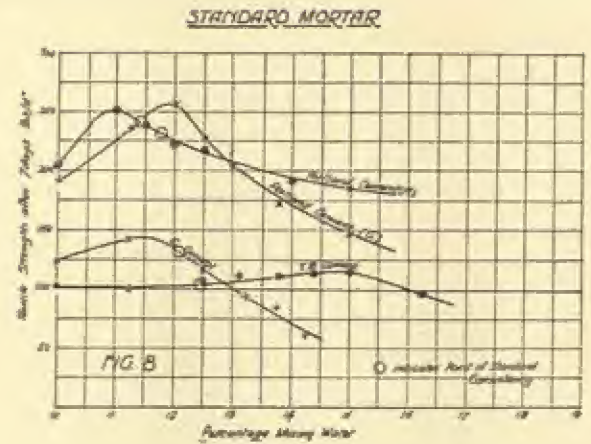


FIG. 8

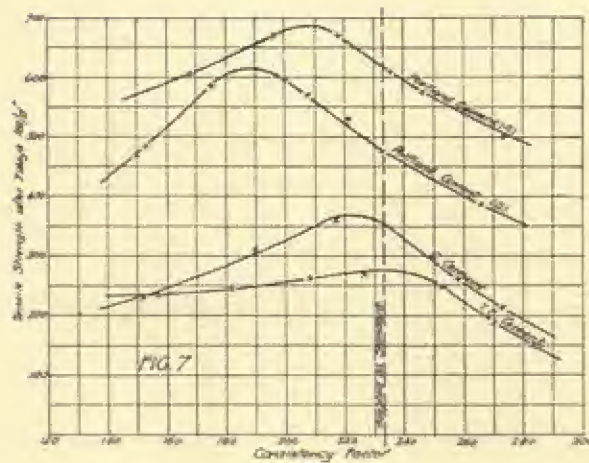


FIG. 7

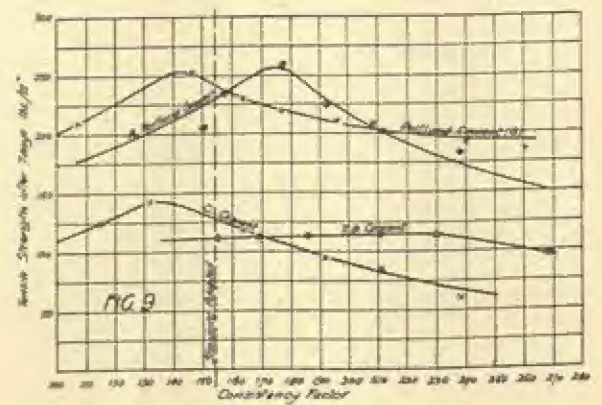


FIG. 9

Fig. 3 shows the relation between the percentage of mixing water and the consistency factor for several different cements. It will be seen that the curve is essentially of the same shape for the different cements, but that the relative positions of the curves vary; this is probably due to the differences in the fineness of grinding of the cements. This will be the subject of further experiment.

(B) *Standard Sand Cement Mortars.*

For 3 : 1 mortars with Standard Leighton Buzzard sand, a different form of mould was found to be necessary, and the final form adopted was the small truncated cone, shown below the table in Fig. 2 (dimensions—height 3 inches, bottom diameter $2\frac{1}{8}$ inches, top diameter $1\frac{1}{2}$ inches).

The mortar, after 5 minutes' mixing, is filled into this cone; the top is struck off and the mould removed, after which the table is given 20 bumps and the new diameter is measured as before.

In Fig. 2 a mortar cone of standard consistency is shown on the table after slumping; also a number of cones that have been allowed to set are shown along the front of the bench. These represent, reading from right to left, mortars containing 13 per cent., 12 per cent., 11 per cent., and 10 per cent. of water respectively.

Fig. 4 shows the relation between Tensile Strength for a normal sand cement mortar, after 7 days, and the percentage of the mixing water.

Fig. 5 shows the relation for various cements with standard sand between percentage mixing water and the consistency factor. The variations between the positions of the curves are not so marked as with neat cement—this is to be expected, as the large percentage of sand present controls the consistency to some extent.

COMPARISON BETWEEN METHODS OF WATER CONTENT CONTROL.

Fig. 6 shows the Tensile Strength, after 7 days, of several neat Portland cements, plotted against percentage of water—it will be seen readily that no "standard" percentage of water could be chosen for all cements which would do justice to these four cements.

Fig. 7 shows the Tensile Strength, after 7 days, plotted against consistency factor—in this case the adopted standard which is plotted in gives a fair comparative for each of these cements.

Incidentally this standard consistency figure for neat cement was adopted as being a compromise between the consistency, measured by the one centimetre cylinder in the Vicat apparatus, given in the American Stand. Spec. and the old Brit. Stand. Spec.; it has been found, however, that the flow-table test is much more sensitive than the Vicat method.

The mix is rather wet, but the mortar is readily filled into moulds without tamping, and a minimum of jogging will remove bubbles from the briquettes.



FIG. 2

Figs. 8 and 9 show similar curves for sand cement mortars; but in these cases the difference is not so marked. As the curves in Fig. 5 are nearly coincident (the scale is magnified), it will be readily understood that curves of Tensile Strength will be similarly situated when plotted to both percentage mixing water and consistency factor bases. For this reason it will be necessary to do more work on sand cement mixtures before arriving at a definite standard for mixing water.

Mr. J. Ernest Franck, the Hon. Secretary of the Science Committee, writes to say that the above article is the result of a visit of the Science Standing Committee to the Experimental Station of the Research Board at Acton, to which reference is made in the Annual Report of the Science Committee (see page 368).

"HISTORY OF THE MANSION HOUSE."

Mr. Sydney Perks has written *The History of the Mansion House*, which the Cambridge University Press will shortly publish. The story of the Mansion House site is carried back to Roman days, an introductory chapter on the old Walbrook stream, including an account of the Roman wall recently discovered by the author under the Mansion House. The book is based throughout on original research work among the archives of the Mansion House, the Guildhall, and elsewhere. There is an appendix on "The Rebuilding of London after the Great Fire of 1666."

Correspondence

SCALE OF PROFESSIONAL CHARGES.

25, Bedford Row, London, W.C.1.
18 April 1922.

To the Editor, JOURNAL R.I.B.A.,—

CLAUSE 15, RE DILAPIDATIONS.

SIR,—As the secretary of the committee which drafted the new scale of charges, I have been requested by the Practice Standing Committee to explain for the benefit of members generally the somewhat ambiguous phrasing of the above clause, which reads as follows :

"For estimating dilapidations and furnishing or checking a schedule of the same, the charge is 5 guineas per cent. on the sum agreed, the minimum fee being £5 5s. For negotiating settlement of claim and for other services the charge is by time in accordance with clause 21."

The wording is, in all essential particulars the same as that in the 1898 scale, and also in the 1914 scale. The latter scale was approved by the general body of members, but, owing to the war, it was never issued.

In consequence of this approval, the committee considered it to be inadvisable to alter the 1914 scale any more than was absolutely necessary. I believe that they thought that the clause in question, as drafted, having done duty for so long a period without question or comment, might still answer its purpose.

I understand the meaning to be as follows :

For preparing a schedule of dilapidations and an estimate of their value, if required, the charge is 5 guineas per cent. upon the sum eventually agreed or determined as being the value of the dilapidations, but that this fee does not cover the time spent in negotiating what that value is, for which time a further charge may be made under Clause 21. When acting for the lessor this method of charging is, I believe, the usual practice. So far, I think that the clause is fairly clear.

When acting for the lessee, the situation is somewhat different, and it is here that the clause is weak.

The lessor's surveyor makes the schedule (frequently a very difficult and troublesome matter), and also often prices it, whereas the lessee's surveyor has only to check it. In many cases this service would be sufficiently remunerated by the 5 guineas per cent. only, but under the clause it would seem that more may be charged.

The services of the respective surveyors not being equal, it would, perhaps, be better if they were dealt with separately in the clause, and no doubt this will be considered in any subsequent revision.

There are also some other points in which the scale could be improved, but it will be generally agreed that it would be most inadvisable to alter it for some years to come, in order that it may obtain the weight and sanction which time alone can give. It is already fairly well

known and recognised, and, notwithstanding some faults, it has proved to be of great value to the profession.

I may add that, of course, the charges in Clause 15 do not cover the superintendence of the making good of dilapidations. This would be charged for in addition under Clause 21, or under Clause 2, if alterations or additions to the premises of sufficient extent to justify a percentage charge are also involved.—I am, sir, your obedient servant,

W. GILLBEE SCOTT [F.].

"SPECIFICATION."

27-29 Tothill Street, Westminster, S.W.1.
30 March 1922.

To the Editor, JOURNAL R.I.B.A.,—

DEAR SIR,—While much appreciating Mr. Stephen Ayling's generously expressed review of *Specification* (1922), which appeared in your issue of March 25, I shall be glad if you will allow me to assure your reviewer that with regard to the entries in the Trade Name Index, no discrimination whatever is made between those firms which take advertising space and those which do not.

Mr. Ayling's hope that "in future editions . . . the index will be amplified and made more complete, independently of the fact that any particular firm does or does not advertise," reveals a misapprehension which I am sure you will permit me to remove.

The Trade Name Index is compiled for the convenience of architects, and any firm which manufactures a useful commodity bearing a distinctive name not included in its own title, may be represented in it.—Yours faithfully,

FREDK. CHATTERTON,
Editor of *Specification*.

THE ROYAL GOLD MEDAL.

The Rt. Hon. Sir Frederick Ponsonby, the Keeper of the Privy Purse, has informed the Council that His Majesty the King has approved of the award of the Royal Gold Medal for Architecture to Mr. Thomas Hastings, of New York.

GRAND ARCHITECTURAL PANORAMA OF LONDON FROM REGENT STREET TO WESTMINSTER ABBEY. [J. Whitelaw, 169 Fleet Street, 1843.]

This is a rare and interesting record of a series of street façades, the majority of which have been swept away. Beginning with Westminster Abbey, and passing along Whitehall, Spring Gardens, Cockspur Street, Waterloo Place, and the whole length of Regent Street to All Souls' Church in Langham Place, the buildings on one side of the streets are carefully portrayed on a folding strip no less than 22 feet 3 inches long and 5 inches wide. The costumes of innumerable pedestrians and equestrians and the variety of vehicles give a good idea of the life in the streets at the period. This "panorama" is a valuable supplement to Tallis's *London Street Views*, published about 1838, a copy of which is also in the Library. A. B.

Mr. A. Fetvadjian's Exhibition of Armenian Architecture

Mr. H. D. Searles-Wood occupied the chair, and Professor W. R. Lethaby gave an address on "The Artist and his work," at the opening ceremony on the 19 April of the exhibition of water-colour and other drawings of Armenian architecture by Mr. A. Fetvadjian, General Bagratouni, the representative for Armenia in London, and many members of the Armenian colony in London, as well as members of the Institute and visitors, were present.

Professor Lethaby in opening the Exhibition referred to the fact that the collection had already been on view in Paris and at the South Kensington Museum. He spoke of the artist's early interest in drawing and of his training at the Ecole des Beaux Arts at Constantinople and later at Rome. In 1900 Mr. Fetvadjian first turned his attention to the interior beauties of his own country and began systematically to study its architecture. Within the last twenty years he had made a large collection of drawings of the early buildings, dating chiefly from the sixth to the thirteenth century, with the ultimate intention of publishing an historical account of them. The speaker said that he had had an opportunity of going through some of the artist's historical notes, and hoped that the projected work would soon be published notwithstanding the difficulties of the present time.*

Mr. Fetvadjian, at the request of the chairman, briefly addressed the audience, stating that in making the drawings he was largely moved by patriotic reasons and a wish to attract the attention of his countrymen and visitors from other countries to the individual beauty of the historical monuments of Armenia.

Professor Lethaby in his introduction to the catalogue of the drawings writes: "This exhibition of the paintings and sketches of Mr. Fetvadjian, who, as Diehl has remarked, 'seems like the Pausanias of another great civilisation who has brought together an incomparable collection of documents'—should prove most interesting and stimulating to English scholars and artists. They show once more the universality of the artistic spirit, and that it embodies itself in infinitely varying forms in responding to local circumstances and types of mind—the bodies and souls of men. And again these ruins of once complete and noble buildings potently and poignantly suggest the romance and the tragedy of an ancient civilisation."

The exhibition of Mr. Fetvadjian's drawings, which are of great delicacy and beauty, closes on the 29 April.

* Professor Lethaby's translation of the notes, which are written in French, will be published in the JOURNAL.

Winter Exhibition of Contemporary British Architecture

An exhibition of contemporary British architecture will be held in the galleries of the Royal Institute, 9, Conduit Street, W.1, from 1 November to 16 December 1922.

The following arrangements have been made for the organisation of the exhibition:

1. All architects in the British Empire are invited to submit their work.
2. Work that has already been exhibited elsewhere will not be excluded.
3. Exhibits must be confined to works executed or illustrations of works projected since the beginning of the twentieth century.
4. All exhibits must be framed and may be glazed.
5. There is no limit to the number of works which may be included in one frame.
6. Models will not be accepted for exhibition.
7. Exhibits may consist of photographs, elevations, perspective drawings, and small scale plans. The exhibitor may choose whether he will send any or all of these. Photographs of drawings are admissible.
8. As the available wall-space is very limited it is anticipated that not more than 15 square feet of wall-space (inclusive of frames) can be allotted to any exhibitor.
9. Charges for packing and transport of exhibits to and from the exhibition must be defrayed by the exhibitors.
10. An insurance policy will be taken out for the exhibits while they are in the custody of the R.I.B.A., but the R.I.B.A. will incur no legal liability for loss or damage.
11. The last day for the receipt of drawings and photographs will be 7 October 1922.
12. All exhibits not accepted must be removed by exhibitors not later than 22 October 1922.
13. The exhibition will be open to the general public (free) between the hours of 11 a.m. and 6 p.m.
14. There will be a Press view on 30 October, and the private view and opening will take place on 1 November 1922.

HENRY SAXON SNELL PRIZE.

This prize, which was founded to encourage improvements in the construction or adaptation of sanitary appliances and is awarded by the Council of the Royal Sanitary Institute at intervals of three years from funds provided by a legacy left by the late Henry Saxon Snell, is offered this year for an essay on "Improvements in the sanitary appliances and fittings for new housing schemes, having regard to efficiency and economy." The essays, to consist of not more than 5,000 words, must be delivered before 31 August to the secretary of the Sanitary Institute. Two competitors may combine in sending essays and drawings. The prize consists of fifty guineas and the medal of the Institute.

Public Lectures on Architecture

The Literature Committee have again this year arranged a series of Public Lectures on Architecture, on the same lines as those which were given so successfully last year. Arrangements have been made for the following lectures:—

- May 18.—“The Value of Public Opinion,” by Halsey Ricardo [F].
May 25.—“What is Architectural Design,” by D. S. Maccoll, M.A., LL.D., Keeper of the Wallace Collection.
June 8.—“Greek Public Buildings,” by Professor Ernest A. Gardner, Yates Professor of Archaeology, University College, London.
June 15.—“Some London Streets and their Recent Buildings,” by Professor C. H. Reilly, M.A., Roscoe Professor of Architecture, University of Liverpool.
June 22.—(Title later)
by W. H. Bidlake, M.A., Cantab.

The lectures will begin at 5 p.m. Admission free. Cards of admission, containing a list of the lectures, will be supplied to members for their friends.

R.I.B.A. MEDAL FOR SCHOOLS OF ARCHITECTURE.

On the recommendation of the Board of Architectural Education, it has been decided that a medal be awarded by the Royal Institute for the best set of drawings submitted, at the Annual Exhibition, by post-graduate students exempted from the Final Examination.

DESIGN FOR AN INSTITUTE POSTER.

It is proposed to hold a competition for architectural students for the design for a poster to be used in the premises of the R.I.B.A. for advertising exhibitions of drawings which are held from time to time in the Institute galleries. The competition is to be confined to students in their fourth or fifth year at a recognised school of architecture. The schools will be requested to select the three best designs of those executed by their students. A jury to consider the designs has been appointed by the Art Standing Committee, consisting of Mr. Halsey Ricardo [F], Professor Adshead [F], and Mr. Alfred Cox [F]. A prize of five guineas will be awarded the author of the premiated design, and the Institute reserves the right of purchasing others of the designs submitted. The competition will close on 15 July. Full particulars relating to the competition may be obtained on application to the Secretary, R.I.B.A.

Competitions

NEWPORT WAR MEMORIAL COMPETITION.

Members and Licentiatees of the Royal Institute of British Architects must not take part in the above competition because the conditions are not in accordance with the published regulations of the Royal Institute for architectural competitions.

IAN MACALISTER,
Secretary.

AUCKLAND WAR MEMORIAL COMPETITION.

The third set of Questions and Answers has been received, and is available for inspection in the library.

COMPETITIONS OPEN.

Auckland War Memorial.
R.I.B.A. Colour Competition.
Dundee War Memorial.
Ipswich War Memorial.

The conditions and other documents relating to the above competitions may be consulted in the Library.

Members' Column

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AN ASSOCIATE, 39 years of age, is desirous of a Partnership or appointment as Assistant with a view to Partnership. Special experience in schools, hospitals, commercial and domestic work. Previously engaged as a County School Architect. London or Home Counties preferred. Highest credentials and references.—Apply Box 899, c/o Secretary R.I.B.A., 9 Conduit Street, W.1.

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FIG. 1.—CATHAYS PARK FROM THE AIR

The Public Buildings of Cardiff

By W. S. PURCHON, M.A. (A.), HEAD OF THE DEPARTMENT OF ARCHITECTURE AND CIVIC DESIGN IN THE TECHNICAL COLLEGE, CARDIFF

IT is quite possible to those who have not visited South Wales the name "Cardiff" may summon up unpleasant visions of a grimy town in which pit-heads and heaps of coal are the dominating features. Even such a misunderstanding as this would not keep the enthusiast away from the Institute Conference which is to be held in this city on 8 to 10 June, but it may nevertheless be worth while to point out at the beginning of this article that such visions prove misleading.

It has been said of more than one of our cities that their greatest advantages consist in their beautiful surroundings and their excellent railway service to London. Of Cardiff it may be said that it is a pleasant city, in a pleasant setting, and that it also has an excellent railway service to the capital.

Although it is realised that to the majority of the members of the Institute who were practising in the years before the war the public buildings of Cardiff need no introduction, it is hoped that this attempt to bring together a series of illustrations and a few brief notes descriptive of these buildings, and of some of the works of art they contain, may be of some little interest and assistance to those who attend the Conference. If

in addition this article induces some members who do not know Cardiff to visit this city on 8 June, the author's purpose will have been achieved.

Modern Cardiff is a city of late development, though it has a history which can be traced back to very early days. Its rapid growth in recent times is due to the development of the economic resources of South Wales in the early part of the nineteenth century. From a small provincial town of 1,870 inhabitants in 1801, it has become a metropolitan city with a population of over 200,000.

As would be expected under such conditions of development, Cardiff has outgrown its public buildings more than once. The Town Hall up to 1861 was in the middle of High Street; afterwards a more ambitious building was erected in St. Mary Street, on the site now occupied by the new buildings of the Co-operative Wholesale Society. This in its turn has given place to the City Hall, one of the buildings in the group in Cathays Park.

Before the City Council acquired Cathays Park, Cardiff could not lay claim to public buildings which would compare favourably with those of other great towns in the United Kingdom. The purchase of

Cathays Park from Lord Bute, however, gave the corporation a site right in the heart of the city which afforded a unique opportunity for grouping together a series of public buildings that might challenge competition with those of other cities. The visitor who, coming to Cardiff for the first time, makes his way to Cathays Park cannot but admit that the opportunity has been well used.

Entering the park from Park Place (see Fig. 1, left-hand lower corner), the Law Courts on the left, the City Hall in the centre, and the uncompleted National Museum of Wales on the right, make a group of great beauty in their setting of trim lawns and green foliage, an interesting touch being added by the old-world thatched building just beyond the Law Courts.

THE CITY HALL AND LAW COURTS.

Erected in 1904 from the designs of Messrs. Lanchester and Rickards, the City Hall and Law Courts form a dignified and graceful group which is generally admitted to show a striking advance on English civic architecture of the immediately preceding period. The design is based on the Renaissance of our own country and of France, but the architects have impressed their individuality on it in unmistakable fashion, and it stands out as a remarkably refreshing contrast to the normal "Renaissance box of bricks" of the later part of the nineteenth century.

The principal front (see Fig. 2) is a composition of three main masses; the central one being occupied by the main entrance, with its richly treated *porte-cochère* which is used on all ceremonial occasions. The freer treatments of architecture do not appeal to all, but the graceful baroque touches seem here to be in the right place. Above the porch is the main window of the Council Chamber, over which apartment is a graceful lead-covered dome surmounted by a representation of the Welsh Dragon, modelled by Mr. H. C. Fehr, and cast in lead on an unusually large scale. The two large groups of statuary flanking the centre window represent the sea receiving the three rivers of the city, the Taff, the Rhymney, and Ely. The end pavilions are treated with bay windows with square attics over, one of the latter giving light to the Mayor's Parlour. The transition from the form of the bay to that of the square attic is skilfully managed by means of groups of statuary which form a series with those on the corresponding pavilions of the Law Courts (see Fig. 6). The group on the western pavilion of the latter building is by Mr. D. McGill, and represents "Science and Education"; the pavilions on each side of the avenue bear groups by Mr. Paul Montford, representing "Commerce and Industry" and "Music and Poetry"; while on the eastern pavilion of the City Hall is a representation of "Welsh Unity and Patriotism" by Mr. Henry Poole. The connecting links between the main masses on the

south front are of two storeys with balustrade over, the rectangular upper windows being divided by panelled piers, while the lower windows are treated with bold mouldings carried without interruption round the curved heads.

The breadth of treatment given to the east and west façades of the City Hall by the plain masses of the end pavilions is particularly noteworthy. In the centre of the front to King Edward VII Avenue is the usual entrance, and over this is the clock tower, perhaps the most striking feature of the City Hall. Rising high above the main structure, it forms a magnificent landmark, and adds beauty to many a prospect in Cardiff and the surrounding district. The richly treated upper part of the tower, beautified by figures (modelled by Mr. H. C. Fehr) representing the four winds, gains much by its contrast with the severely plain sub-structure. The tower composes well on the west façade, and on the main front, particularly when seen on entering the park from Park Place; it also helps to bring the Law Courts into unity with the City Hall.

It will be noticed that the orders are only introduced on the exterior in the decorative treatment of the tower.

The interior decoration of the City Hall is no less striking than that of the exterior. The outstanding feature is the Marble Hall (see Fig. 3) on the first floor, with its monolithic columns in Siena marble, forming an approach to the Assembly Hall of great dignity and beauty. The Assembly Hall (see Fig. 4) is a fine room, well and interestingly treated with an Ionic order set diagonally, the vigorous horizontal lines of the entablature being characteristic of the work of the architects. The richly treated segmental ceiling pierced by the windows, and the magnificent electric light pendants, make this room a particularly beautiful one. The Council Chamber (see Fig. 5) contains much which is of great interest to the student of architecture, including the perspective arches in the panelling and the ably designed furniture.

The City Hall has only been built a comparatively short time, but already it has been enriched by numerous gifts of paintings and statuary. Of two great gifts the first was made by Mrs. Andrew Fulton, widow of Alderman Andrew Fulton, J.P. (Mayor of Cardiff, 1884), who bequeathed one-fourth of her residuary estate to be applied to the completion and decoration of the City Hall, and the purchase of paintings, statuary, and other works of art. The other and more recent gift is that of the Welsh Historical Statuary by Lord Rhondda of Llanwern.

The paintings and statuary are nearly all on the first floor. There is a large picture on each side of the main entrance to the Assembly Room, one, "The Penitent's Return," by Sir Luke Fildes, R.A., purchased out of the funds of the Fulton bequest, and the other a painting by Margaret Lindsay Williams of the National



FIG. 2.—CITY HALL, CARDIFF



FIG. 3.—MARBLE HALL, CITY HALL, CARDIFF



FIG. 4.—ASSEMBLY HALL, CITY HALL, CARDIFF



FIG. 5.—COUNCIL CHAMBER, CITY HALL, CARDIFF

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Ceremony of the Unveiling of the Welsh Historical Sculpture by the Right Hon. D. Lloyd George, presented by J. C. Meggitt, Esq., J.P., of Barry.

Near the entrance to the Council Chamber are two pictures purchased from the Fulton Fund, "The Shadow," by E. Blair Leighton, and "Winter," by Joseph Farquharson, A.R.A. Here also is a portrait by Herbert Draper of the late Lieut.-Col. Lord Ninian Crichton-Stuart, M.P.

In the corridor leading to the Luncheon Room are two paintings, "The Holy Loch, Greenock," by James Greenless, and the "Bay of Naples," by John Glover. In the corridor leading to the Lord Mayor's Room are portraits of Lieut.-Col. F. H. Gaskell, of the 16th (Cardiff City) Battalion Welch Regiment, and of Sir W. J. Thomas, both by L. De Berna; "The Ceremony of Investiture of the Lord Mayor of Cardiff with the Lord Mayoral Thumb Ring, November 1911," by Frank Craig; the "Knighting of the Lord Mayor of Cardiff," by W. Hatherall; and an example of the work of a Welsh artist, Penry Williams, the "Procession returning from Festa of the Madonna del Arco at Naples."

Further along the corridor near the Town Clerk's Office is "Through the Woods," by Mark Anthony, who lived for a time at Cowbridge; and on the wall above the stair leading to the Town Clerk's Office a fine seascape by Norman Wilkinson, depicting "H.M.S. *Cardiff* leading in the surrendered German Fleet, November 1918," and "The King saluting the Grave of an Unknown Soldier," by G. F. Harris, a local artist.

In the Assembly Room are large portraits of General Botha by Frank C. King, and of the Earl of Plymouth; while in the Council Chamber and Committee Rooms are many portraits of former Mayors and Lord Mayors in their robes of office.

The unique series of statues of Welsh National Heroes, which the city owes to the munificence of the late Lord Rhondda of Llanwern, is in the Marble Hall (see Fig. 3).

The central figure is "Dewi Sant" (Saint David), the Welsh patron saint, by Sir W. Goscombe John, R.A. Flanking the staircase on one side are statues of Llewelyn Olaf (Llewelyn the Last) by Harry Pegram, A.R.A.; Harri Tewdwr (Henry VII), by E. C. Gillick; Owain Glyndwr (Owen Glendower, the great Welsh soldier statesman), by Alfred Turner, R.B.S.; Sir Thomas Picton (who fell at Waterloo), by T. Mewburn Crook, R.B.S.; and in the niche, William Williams, Pantycelyn, the great Welsh hymn-writer, by L. S. Merrifield.

On the other side are Hywel Dda (Howell the Good), by F. W. Pomeroy, A.R.A.; Buddug (Boadicea), by J. Havard Thomas; Dafydd ap Gwilym, by W. Wheatley Wagstaff; Giraldus Cambrensis (the historian and scholar), by Henry Poole, R.B.S.; and, in the niche,

Bishop Morgan (the first translator of the Bible into Welsh), by T. J. Clapperton.

Two bronze tablets with low relief portraits will be found on the landings of the stairs leading to the Marble Hall, one commemorating Sir Edward J. Reed, for some years M.P. for Cardiff, by Sir George Frampton, R.A.; and the other commemorating Captain Scott, the Antarctic explorer, who sailed in the *Terra Nova* from Cardiff on his last voyage, by W. Wheatley Wagstaff.

THE LAW COURTS.

The architectural treatment of the Law Courts (see Fig. 6) was skilfully devised in perfect harmony with the City Hall, but on somewhat severer lines. The south front continues the treatment of that of the City Hall, but in place of the central feature and two connecting links of six bays each, the two end pavilions flank an arrangement of eleven bays with no central mass. Comment has already been made on the sculptures over the bays of the end pavilions. The eastern façade (to King Edward VII Avenue) resembles the western façade of the City Hall in its blank end pavilions, but contains as its central feature the main entrance, with a fine double loggia surmounted by two beautifully designed cupolas. The western façade, to the North Road, is also treated with great ability.

Internally the Assize Court, Assembly Hall and Central Lobby are fittingly treated more severely, but no less beautifully than the interior of the City Hall.

It is worthy of note that all the furniture and fittings in this building and the City Hall and in the Glamorgan County Hall were designed by the architects, a fact which largely contributes to the harmony of the interiors.

THE NATIONAL MUSEUM OF WALES.

To the east of the City Hall is the National Museum of Wales (see Fig. 7), now in course of construction. The portion already erected is only about a quarter of the complete scheme, as may be seen from the interesting model in the City Hall.

One hundred and thirty designs were submitted in competition, and the assessors, Sir Aston Webb, Sir J. J. Burnett and Mr. E. T. Hall, awarded the first place to Messrs. Smith and Brewer, to whom the work was entrusted. The architects have designed the building with an able plan and a noble architectural treatment worthy of its position as a national monument in a group mainly devoted to city and county purposes. The leading motive of the plan is the large interior court surrounded by the public galleries on two floors, while outside the public galleries is the space for the reserve collections with a mezzanine floor between the ground and first floors. In the completed scheme the total superficial area in the public galleries and in the

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reserve galleries will be 81,000 and 50,000 feet respectively. The entrance is arranged in the centre of the south front, and leads to a magnificent hall under the dome.

The exterior, while refined to a marked degree, is by no means lacking in strength, and it seems clear that the structure, when completed, will possess that crowning quality of unity which is so rare in buildings of such dimensions. In the earlier drawings, windows were shown in the end pavilions on the flanks; the omission of these has considerably strengthened the design.

Of the four groups of sculpture on the south front, the western pair, representing the Prehistoric and Classic periods respectively, are by Gilbert Bayes, while the eastern groups, executed by Richard Garbe, represent the Mediæval and Modern periods. The two groups on the western façade, by Thomas J. Clapper-ton, representing Mining and Shipping, are remarkable for their extraordinarily high architectural quality. Of the interior it is as yet too early to write, but those who have been fortunate enough to inspect it have been surprised and impressed by its magnitude and, even in its present incomplete condition, by its dignity. A small portion of the building is already in use, and the combined system of inlet and extract ventilation is working. The fresh air is admitted through water screens in the basement, and then forced by electric fans through ducts leading to the various rooms. The vitiated air is similarly drawn through ducts to the extract fans and thence discharged through main extract shafts leading to the top of the building. In cold weather the fresh air is warmed by passing over steam-heated batteries. The only chimney is the shaft from the boiler-house.

THE UNIVERSITY REGISTRY.

The University of Wales consists of four Colleges, Aberystwyth, Bangor, Swansea, and the University College of South Wales and Monmouthshire; the latter, being installed in Cathays Park, will be dealt with later in this article. The University Registry (see Fig. 8), which deals with the activities of all the four colleges, is to the north of the Law Courts on the west side of King Edward VII Avenue, and was the first building to be erected on the Cathays Park site. The architects, Messrs. Wills and Anderson, designed this building in the maturer English Renaissance manner, and succeeded in investing it with a quiet academic dignity befitting its purpose. The main façade consists of a basement, a main storey, treated with the Ionic Order in the central part, and an attic with circular windows. The Registry is now being extended to meet the growing needs of the University.

THE GLAMORGAN COUNTY HALL.

Proceeding up King Edward VII Avenue, the building beyond the University Registry is the Glamorgan

County Hall (see Fig. 9), a worthy companion to the civic buildings of the Cardiff Corporation, though differing widely from them in conception. Its fine entrance hall leads to a noble council chamber arranged to seat 88 members, beyond which is an interesting series of committee rooms overlooking the North Road, while in other parts of the building may be found the offices of the various county administrative departments. The main façade, treated with a fine portico of coupled Corinthian columns, flanked by pavilions designed with an ability which is particularly conspicuous in their lower portions, is worthy of comparison with any similarly classical composition; while the back elevation, with its balcony supported on well-designed stone brackets, its curved wing walls and delightful central feature, is remarkable for its grace and charm. This elevation alone would put its designers, Messrs. Harris and Moodie, in the front rank of modern English architects; they risked much in departing from the obvious, but in so doing they have achieved sheer beauty.

The boundary railing on the North Road front was designed by the county surveyor.

At the extremities of the stylobate on the main façade are two noteworthy groups of sculpture symbolical of Navigation and Mining. These and the charming figures on the wing walls at the back are by Mr. Albert Hodge, as are also the figures of a Druid and a Bard which are placed on pedestals in the interesting screen behind the dais in the Council Chamber. The carving which enriches the central feature of the front to the North Road is the work of Mr. Arthur Broadbent, while the bust of the Chairman, in the corridor, is by Sir W. Goscombe John, R.A.

THE TECHNICAL COLLEGE.

Beyond the County Hall is the Technical College of the city (see Fig. 10), which was opened by the Lord Mayor in 1916. The architects, Messrs. Ivor Jones and Percy Thomas, of Cardiff, who obtained first place in an open competition for this building, relied for effect on beauty of architectural form and proportion rather than on ornament and sculpture, and its ably designed Neo-Grec façade with a central portico of the Doric Order is very dignified. The architectural student may with advantage study the methods employed in this building, in the Law Courts, and in the Museum, for dealing with the diminution of columns when used in a recess.

The Technical College, which is an excellent solution of a difficult practical problem, is in the form of a hollow rectangle, the entrance front and the two sides being completed, while the back block is only finished in part. Internally, the main hall, which occupies a considerable portion of the interior of the rectangle, is a fine example of the excellent results which can be ob-



FIG. 6.—LAW COURTS, CARDIFF



FIG. 7.—THE NATIONAL MUSEUM OF WALES



FIG. 8.—THE UNIVERSITY REGISTRY



FIG. 9.—GLAMORGAN COUNTY HALL



FIG. 10.—TECHNICAL COLLEGE, CARDIFF



FIG. 11.—THE UNIVERSITY COLLEGE OF SOUTH WALES AND MONMOUTHSHIRE: MAIN ENTRANCE



FIG. 12.—CARDIFF CASTLE AND GROUNDS FROM THE AIR
 River Taff and Canton Bridge in foreground. Cathays Park and St. John's Church to the
 left and right respectively in the background. Note Duke Street immediately to the right
 of the Castle



FIG. 13.—CARDIFF CASTLE

tained inexpensively by a skilful designer. The able manner in which the difficulty of the levels has been overcome should also be noted. The School of Architecture is housed in this building, and it is here that, by kind permission of the City of Cardiff Technical Instruction Committee, the meetings of the Conference will be held.

THE UNIVERSITY COLLEGE OF SOUTH WALES AND MONMOUTHSHIRE.

Facing the centre of the park on the east side are the buildings of the University College (see Fig. 11), which were opened by the President, the Right Hon. the Earl of Plymouth, on 14 October 1909; while the Viriamu Jones Laboratory was formally opened on 26 June 1912 by His Majesty King George V. The buildings were designed by Mr. W. D. Caröe in his well-known manner—a version of the earlier English Renaissance—and when the full scheme has been completed it will form a symmetrical group round a great central court.

The Library, the gift of the Drapers' Company, is in the form of a great galleried hall, and is one of the principal rooms in the portion of the building at present completed. The remainder of this portion is used mainly by the Faculty of Arts and for administrative purposes.

The work of the Faculty of Science is still carried on in the old University College, just beyond the Taff Vale and Rhymney Railway bridges, at the beginning of Newport Road.

Adjoining the old college is the new building for the Welsh National School of Medicine, designed by the late Colonel E. M. Bruce Vaughan. The cost of this block of buildings is being borne by Sir William J. Thomas, Bart. Its completion has been delayed by the war.

PUBLIC STATUARY.

With the development of Cathays Park has come the erection of some notable public memorials. On the green in front of the Law Courts is a statue of Judge Gwilym Williams, by Sir W. Goscombe John, R.A. In the centre, approaching King Edward VII Avenue, is a memorial "To the memory of the Welshmen who fell in South Africa, 1899-1902," by Alfred Toft (see Fig. 6). A list of nearly two hundred names is given, while the panels bear bronzes with the names of the principal victories in which the Welsh regiments took part, and emblematic figures of "Warfare and Courage" and "Grief." The composition is crowned with the winged figure of "Peace."

In the small green near Park Place are two statues, one of Mr. John Cory, D.L., J.P., of Duffryn, and the other of Lord Ninian Crichton-Stuart, M.P., both by Sir Goscombe John. Not far from it is one of the finest examples of the work of this eminent sculptor (himself a native of Cardiff), the equestrian statue of Godfrey,

1st Viscount Tredegar. In the public gardens facing the University College is a statue of Henry Austin Bruce, 1st Lord Aberdare.

The first statue erected in Cardiff was that of the second Marquess of Bute, by I. Evan Thomas. It now stands at the end of St. Mary Street, near the G.W.R. Station. One of Cardiff's earlier public men is commemorated by the statue of John Batchelor, "The Friend of Freedom," in the Hayes.

THE CASTLE.

Cardiff Castle, the seat of the Marquess of Bute, is situated in beautiful grounds (see Fig. 12) adjoining Cathays Park, and entered by the gateway in Castle Street, quite close to the end of Duke Street. The present buildings of the Castle (see Fig. 13) are to a considerable extent a restoration by Burges of the mediæval fortress. On the site have been discovered the remains of a Roman gateway and of a massive wall of Roman origin. Upon this foundation an earthwork fortification was erected at a later period. In the Middle Ages a wall enclosed the keep and the mediæval castle. The only portion of the Norman castle remaining is the ruined keep, built by Robert, Earl of Gloucester, which stands on a moated mound in the centre of the court. The main entrance from Castle Street has a somewhat grim aspect, relieved by flower-beds and the vines trained against the walls. At intervals on the outer walls are sculptured animals, the work of Mr. T. Nicholls. Next to the gateway is the Black Tower, which dates from the thirteenth century; it is linked to the clock tower by a massive curtain wall. The latter tower is modern, and formed part of an extensive scheme of restoration and addition made by the late Marquess of Bute. The interior of the Castle is lavishly decorated in the mediæval manner of which Burges was such an interesting exponent. Burges played an important part in the Gothic Revival of the nineteenth century, and students of that movement will be interested in the house he designed in Park Place, now used as the offices of the Llandaff and Dinas Powis Rural District Council.

ST. JOHN'S CHURCH.

With the exception of the church of St. John (see Fig. 14), all the places of worship in the city are modern. This spacious church, containing interesting memorials, was probably built in the last half of the fifteenth century, but has undergone extensive restoration in more recent times. The tower (restored in 1897), with its rich coronal of West Country type, is particularly fine; the best view of it is that obtained from St. Mary Street, looking down Church Street.

Of the modern churches St. German's in Metal Street may be mentioned as an interesting example of the art of Mr. Bodley.

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THE FIRE STATION.

In Westgate Street, opposite the Cardiff Arms Football Ground, is the Corporation Fire Station (see Fig. 15), a fine specimen of the work of Mr. E. Vincent Harris, who, with Mr. Moodie, designed the Glamorgan County Hall. This building, with its lofty entrances boldly treated as a rusticated Doric colonnade, its field of soft-toned hand-made brickwork relieved by stone only in the case of the first-floor windows and the simple band which marks the frieze, its fine crowning cornice, Italian tiled roof and delightful hose-drying tower, is an excellent example of the sound architectural treatment of a utilitarian building. Students of the Italian Renaissance will be reminded by the lower part of this fire station of Palladio's Palazzo Tiene, Vicenza, and Sanmicheli's gateways in Verona.

THE PUBLIC LIBRARY.

Near to the church of St. John is the Central Public Library. The original building was erected in 1882 to house the Library, Museum, and Science and Art Schools, but these institutions soon outgrew it, and the Science and Art Schools now form part of the new Technical College in Cathays Park, while the Museum will be transferred to the new building of the National Museum. An extension of the building, designed by Mr. Edward Seward, was opened in 1896 by King Edward VII, then Prince of Wales. The main front, crowned by a large figure of Minerva, faces the Hayes.

KING EDWARD VII HOSPITAL.

A short distance up the Newport Road is the King Edward VII Hospital, formerly known as the Cardiff Infirmary. This hospital has been continuously added to and extended as the result of gifts by local benefactors, one of the most recent being the hospital church.

THEATRES.

A short distance up Queen Street, from St. John's Square, is the Cardiff Empire, recently rebuilt and enlarged by Mr. T. R. Milburn, of Sunderland. The New Theatre, by Mr. Ernest Runtz, is in Park Place; while the Old Theatre Royal, renamed the Playhouse, in St. Mary Street, has recently been reconstructed from the designs of Messrs. Willmott and Smith, of Cardiff.

LLANDAFF CATHEDRAL.

While not strictly within the scope of these notes, Llandaff is actually a suburb of Cardiff, and a short tram ride along Cathedral Road brings the visitor within a few minutes' walk across Llandaff Fields to Llandaff Cathedral (see Fig. 16), a small but interesting mediæval structure ably restored by Mr. Pritchard, a local architect, with the assistance of Messrs. Seddon

and Wyatt. This building in its peaceful setting forms a striking contrast to the busy streets from which it can be reached so readily.

The date of the foundation of Llandaff is uncertain, but it is generally assumed to be the earliest of the Welsh sees. Little is known of the early history of the Cathedral beyond the fact that the building of the present church was commenced in 1121, during the time of Urban, the first Norman Bishop, who, when he was consecrated in 1107 or 1108, found his cathedral in a half-ruined condition.

Of Urban's church little remains, and that little constitutes a puzzle as yet unsolved by the antiquary. Some consider that the Norman arch still existing between the presbytery and the Lady Chapel is the original chancel arch, others that it was originally between the chancel and the apse. The north and south Norman doorways are both of late date, the former being distinctly Transitional; and, unless the building of the early church was long delayed, these either formed part of a pre-Gothic extension to it or have been rebuilt in their present position.

The west front, a fine piece of early Gothic, is the most beautiful portion of the building, and was probably constructed with the nave and choir between 1193 and 1229. The Chapter House, a simple but interesting rectangular example which takes the place of a transept on the south side, was probably erected about 1240. It is in two storeys, the lower one vaulted with a simple thirteenth-century vault resting on a central column. The upper storey is octagonal, and is covered with a steep pyramidal roof.

The Lady Chapel, supposed to have been founded by Bishop de Bruce (1265-1287), is of early Decorated type, with geometrical window tracery and a simple quadripartite vault; the Presbytery belongs largely to a later part of the Decorated period, while towards the end of that style the north and south aisles were rebuilt with ogee arches to the windows.

Towards the end of the sixteenth century the Cathedral is spoken of as being in a state of almost irreparable ruin, a condition which appears to have continued until 1736, when Wood of Bath built a Renaissance church amongst the ruins. Old prints show this as a rectangular hall with aisles, the main hall covered with a groined vault, occupying the eastern part of the nave, and though of the south-west tower part was left, the central part of the west end of the old church fortunately remained more or less untouched.

Shortly after 1836 commenced the agitation which resulted in a restoration scheme, and in 1857 a partially restored Cathedral was opened. After this ceremony a scheme for completing the work was launched. The work was entrusted to the architects already named, who cleared away Wood's "Temple," and brought back the Cathedral to something like its earlier form.



FIG. 14.—ST. JOHN'S CHURCH, CARDIFF



FIG. 15.—THE FIRE STATION, CARDIFF



FIG. 16.—LLANDAFF CATHEDRAL.



FIG. 17.—RIVER TAFF, CARDIFF.

The north-west tower was given a new crown of pinnacles, and finally the new south-west tower and spire were erected.

It should be noted that there is no transept (other than that provided by the Chapter House on the south side), and that the "crossing" is unmarked externally, except by the base of a *flèche*.

The rebuilding of Llandaff Cathedral is mainly associated with the name of Alfred Ollivant, whose episcopate lasted from 1849 to 1883, and who re-awakened the religious life of the diocese, and saw the Cathedral completely and successfully restored.

Seddon was responsible for much of the internal decoration and fittings of the restored Cathedral. The four panels of the pulpit, representing Moses with the Stone Tables of the Law; David harping; St. John the Baptist; and St. Paul, were executed from Thomas Woolner's panels. For the Sedilia in the Sacristy a drawing was made by Dante Gabriel Rossetti, and used as the subject of one of the gable panels. Rossetti was also commissioned to paint the triptych for the new Reredos, the three subjects being David as a Shepherd Boy, the Nativity, and David as King. The figure of the Virgin was painted from Mrs. Morris, and that of David Rex from Morris himself. Other figures are said to have been painted from Burne-Jones and Swinburne. Some of the painted glass in the aisle windows and the frontal for the choir altar were the work of Morris and Marshall, a firm with which William Morris was associated in his work for the revival of the decorative arts.

TOWN PLANNING.

Students of town planning fully realise that a civic survey is a necessary preliminary to the preparation of a definite scheme. They will, however, be interested not only in the existing lay-out of the civic centre and in the proposed widening of Duke Street (the necessity for

which would seem to be clearly indicated in Fig. 12), but also in the possibility at a more prosperous period of opening up a worthy approach to Cathays Park, with an adequate treatment of its southern boundary, and the question of connecting up its northern side with other parts of the city. It will at once be noticed by the visitor that the docks and industrial area are at some distance from the civic and shopping centres.

Other features of interest in this connection are Roath Park, in the north-east of Cardiff, which covers an area of 130 acres, including a lake of 32 acres; Llandaff Fields, an open space on the north-west of Cardiff, of great value because, like Roath Park, it leads out from the city towards the open country; the sports ground in Westgate Street; and the preservation of the banks of the River Taff (see Fig. 17), which results in the possession by the city of a view from Canton Bridge (within five minutes' walk of the City Hall), which is a source of great pleasure both to residents and visitors.

The Cardiff Corporation has been made the Town Planning authority for a large area (approximately 20,000 acres), including the pleasant foot-hills and woodlands to the north and west of the city, which it is proposed to preserve as permanent open spaces under the scheme.

I wish to acknowledge with thanks my indebtedness to Mr. Harry Farr, F.L.A., the City Librarian of Cardiff, for some of the notes on the statuary and paintings in the City Hall; to Mr. Dockett Smith, the Development Agent, for permission to reproduce a number of the illustrations; to the Registrar of the University College for the photograph of that building; to Messrs. Ivor Jones and Percy Thomas for the photograph of the Technical College; to Mr. E. Vincent Harris for the photographs of the Glamorgan County Hall and the Fire Station; to Mr. A. H. Lee for the photograph of the Museum; and to two of my students, Mr. Thomas and Mr. Monroe, for the photograph of the University Registry and the plan of Cardiff respectively.—W. S. P.



Building Arbitrations*

BY ALAN E. MUNBY (F.), PRESIDENT OF THE YORK & EAST YORKS ARCHITECTURAL SOCIETY

IF Mr. Punch's advice upon marriage were applied to and taken by those about to arbitrate there would be no need for my paper this evening. Most building contracts have happy terminations and, given a reasonable client and reputable contractor, if all does not go well, careful scrutiny of the Architect's part in the contract arrangements would be necessary before attempting to put one's finger on the source of trouble. Sometimes, however, clients appear who through sheer obtuseness or an inherent passion for litigation will misread their obligations, or one is unfortunately dealing with a firm of contractors equally unable to take a reasonable view of what is fair and equitable. It is in these happily rare cases that the Architect finds himself in difficulty. He holds a peculiar position under a building contract in that, although the paid agent of his client, he has on many matters to act impartially between his client and the contractor. It is usually easy to maintain the interests of the client but at times not so simple to safeguard those of the contractor which this impartiality demands, and the exercise of which does so much to raise the standard of the profession.

Appeals to arbitration should not be lightly made, as if complex and prolonged they often involve eventual loss even to the winning side. In the first instance the Architect should use his authority under the contract to endeavour to promote an amicable settlement. We are concerned, however, with the failure of such efforts. There are, of course, several rôles which an Architect may be called upon to play in a building dispute. If he is asked to advise upon the probable issue of going to arbitration he should be careful to confine his advice to technical matters and to refer his client elsewhere upon the legal aspect of the case. He may be called upon to supply the technical details of a case for his client's legal advisers; he may find himself called as one of those much discredited people known as "expert witnesses"; or he may have to give evidence as an ordinary witness. All this points to the great desirability of precision and documentary testimony, and though we all in the pressure of affairs have to make use of verbal and telephone instructions and arrangements, these if not always confirmed in writing should be supplemented by good diary entries. In this short paper the whole field cannot be touched upon, and I therefore propose to confine myself to a brief survey of an Architect's duties when called upon to fill the highest position—that of an Arbitrator.

An Arbitrator may be appointed in several ways. He may be empowered to act by a judge of the High Court,

in which case his authority is assured and he is responsible to the Court. He may be nominated by the Court as a referee. There are also a number of special appointments provided for under special acts outside the scope of building. I shall, however, confine myself to the usual cases of appointment by consent before or after the dispute and to the work of a single arbitrator, which covers most of the ground. Provided the parties agree to his appointment, anyone may be an arbitrator, that is, qualifications for the position are not legally necessary, though it need hardly be added that they are usual and desirable.

Once approached, the first thing is to guard against anything which, however unjustly, can be alleged as partiality. It not infrequently happens that one side, either the principal or more usually his legal or other representative, will call or ask to call just to explain matters in an informal way. Again, documents may be sent by one side for perusal with a gratifying letter paying tribute to the merits of the Arbitrator—real or supposed. Any such attempts to "get in first" are in the worst interests of the party attempting them if the other side is cleverly advised. Preliminary interviews by one side must be, with every politeness, refused and documents opened inadvertently sealed up (best in the presence of a witness). Of course one side must usually first approach the Arbitrator and it is generally the aggrieved party who takes this course, the other side complying unwillingly. On such appeal the prospective Arbitrator should write an identical letter to both sides requesting evidence of a formal submission to arbitration, or if this has been tendered by the party applying he should send particulars to the other side, who will necessarily be cited, and ask for their comments as to the submission being in order. The source of the Arbitrator's appointment should also be stated to the other side. When a written contract between the disputing parties exists, as for instance the R.I.B.A. form of Building Agreement, it will usually contain an arbitration clause which itself forms a submission and by which the parties are bound in reference to the appointment of an Arbitrator. In such cases the clause usually provides powers enabling one side to make the necessary appointment, after which the Arbitrator can begin to act. If the Arbitrator is not named in this submission, means for his selection will be provided, for example, by the nomination of the president of the Royal Institute of British Architects, enabling one side to proceed to the appointment, and this being in order and the Arbitrator having no interest in the dispute, he can begin his duties. But should the other side neglect to

* A Paper read before the York and East Yorks Architectural Society at York.

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attend when called upon or refuse to reply to correspondence so requesting them, the Arbitrator will be well advised to exercise some patience and to still acquaint the delinquents of all proceedings and of his proposed action.

Occasionally one side will object to the Arbitrator, and I have experienced this on taking up a dispute, the settlement of which was delayed by the death of the original Arbitrator, and in which the Official Trustee was a joint respondent. In this case I adopted the usual course of having my appointment confirmed by the Court, a matter carried through by the appealing party's solicitors at, for the time being, their expense.

If the Submission has to be drawn in consultation with the Arbitrator it is well to make it wide. For example, "all matters in difference which have arisen or during the arbitration shall arise between — and — touching —." It should also be mentioned that the arbitration is one under the Act of 1889, if, as usual, this is intended. This imparts definite powers as to procedure and includes questions of costs. The Submission requires a 6d. stamp, but variations in its terms may be made by mutual consent.

It is very desirable that a Submission should contain a clause obliging the parties to take up the Arbitrator's Award within a short limited period and to pay the fees therefor. Building contracts as a rule do not include such a provision as though the Arbitration Act empowers an Arbitrator to assess costs and determine the manner of payment there appears curiously to be no obligation to take up the Award. Should it happen that the parties, seeing during the hearings that neither is likely to win decisively, agree to settle their differences privately, they may neither of them take up the Award, when the Arbitrator may have great difficulty in obtaining his fees and costs.

Less simple are cases, by no means infrequent, where there is nothing but a verbal contract or an inadequate document not providing for arbitration. In these cases unless the parties agree between themselves on the Arbitrator there appears to be no means of forcing an unwilling party to accept an appointment made by the other side. If there is no obligation to invoke arbitration and one party refuses, the other must bring an ordinary action, when, if the matter is technical, this will probably be referred to an Official Referee, who himself often wants technical advice. If this probability can be brought home to the unwilling party it may sometimes induce him to accept an Arbitrator by agreement. If the prospective Arbitrator ultimately fails to secure his position he is quite at liberty to act as the representative of one side in any proceedings which may subsequently develop under another Arbitrator or in the Courts.

Safely steered into his official position the Arbitrator may now begin his duties and exercise his powers. These are very considerable; he may administer the oath,

hear or refuse to hear or peruse evidence, he may even commit for contempt of his Court. He has, in fact, all the powers of a judge, save that he must not deal with matters of law if objection is taken.

The first step is usually to bring the parties together for a preliminary and informal discussion in order to acquaint the Arbitrator with the nature of the dispute and the extent of formalities proposed in the hearings. At this meeting the terms of reference to the Arbitrator must be clearly agreed. These terms may be already conveyed in the Submission in such a covering clause as "all matters in difference" above referred to.

Often, however, specific terms of reference are agreed and this is generally desirable to prevent objections and complications during the progress of the hearings, when one side may wish to bring in a novel issue leaving the Arbitrator the responsibility of deciding whether this comes within the scope of the arbitration or not. In a formal arbitration it is usual for the appellants' solicitor to formulate definite "Heads of Claim" which, handed to the solicitor for the respondent, produce "Heads of Defence," and these documents are handed in to the Arbitrator. In such cases the claim may form a sufficient reference as it should enumerate the matters in dispute.

In very simple cases possibly the principals themselves, or, more usually, their respective surveyors or architects, may attend, and it may be that one or two hearings without other advice or witnesses may be sufficient. More generally the solicitors for either side will attend and it may be left to them to decide which tells the story. Unless further formal hearings are not contemplated no case should be presented at this meeting and discussion should be confined to agreed facts, the extent of matters agreed to be disputed, and the conduct of the formal hearings. As to the last, the Arbitrator should ascertain whether counsel will appear and get some idea of the number of witnesses (who may be compelled to attend if within the United Kingdom) and exhibits, which expression includes documents and letters, so that he may make adequate arrangements for the reception and comfort of those attending. He should encourage, though he cannot control, some equality of entourage on both sides; anyhow, each side should know whether the other intends to brief counsel and the general procedure proposed, after this meeting. The Arbitrator should also call for any undisputed documents, that is documents agreed by both parties as proper for his perusal, such as the contract, specification, drawings, and perhaps some correspondence. He should also ascertain whether a visit to the disputed works—generally essential—is desired, and settle a convenient time and place for both parties for a formal hearing. Let us assume that a "full blown" arbitration is in question with one of the parties out to make trouble. Arrangements made which involve a sufficiently large room with ample writing and table accommodation and waiting

place for witnesses, the parties arrange themselves in two camps and counsel for the appellant (a more suitable term than plaintiff) is asked to open his case. The first difficulty may arise by the respondent's counsel immediately asking for an adjournment, which will be strongly resisted by the other side, who may have witnesses in attendance. Now the Arbitrator has to make up his mind at once whether to grant an adjournment or not, and unless he is quite convinced that the request is frivolous he will be wise, even at the cost of much annoyance to the other side, to comply. It may be alleged that certain new facts have been suddenly disclosed, or documents promised not sent by the other side, and until more information is available it may not be possible to judge the value of these assertions. The Arbitrator in such a case may warn the appealing side that he will mark the costs of such adjournment to them unless he subsequently sees reason to the contrary. This will usually put an end to any frivolous application. If one of the parties fails to appear after being duly summoned the other side will press for proceeding, but this is very dangerous and might compromise justice if a valid excuse were afterwards forthcoming. In such an event it is also wise to adjourn and let the defaulting party bear the cost. These difficulties over, counsel for the appellant opens his case and should be interrupted as little as possible; the Arbitrator should suppress interjections by opposing counsel, whose turn will come, but he may think it necessary to require explanations and to check the proceedings to take special notes of important matters. The opening concluded, counsel will call his witnesses and the Arbitrator should ask whether he wishes them sworn, and be prepared with two or three of the dozen or more forms of oath existing to suit various religious persuasions. The oath is not necessary. In reply to such an interrogation counsel once rejoined to me, "I do not wish it, if the witnesses are going to lie they will lie anyhow." Not a compliment to this ancient legal solemnity.

It is best to follow the ordinary Court procedure as this materially helps the legal participants. Counsel for the appellants begins by opening his case and when his speech is concluded he calls his first witness and examines him. Counsel for the respondent then cross-examines the witness if he wishes to do so and finally counsel for the appellant may re-examine but only on matters arising out of the cross-examination. Subsequent witnesses called by counsel for the appellant are dealt with in the same manner till all are disposed of. The respondent's counsel then opens his case and calls his witnesses, who may be cross-examined by counsel for the other side and re-examined on the cross-examination as before, when the respondent's counsel may sum up his case. Finally the appellant's counsel will address the Arbitrator on the whole case. Now it sometimes happens that the respondent's counsel will ask to

reserve his case and call his witnesses first in order to have the last word, the summing up by counsel being the privilege normally of the appellants but in such an event falling to the respondents. The Arbitrator need not and usually should not concede this departure from precedent and generally a polite intimation that he would prefer to hear the learned counsel before his witnesses will in such cases be sufficient intimation that the departure is unwise. The last word said in counsel's final address, the hearings are concluded, but though I have dealt with procedure I have not referred to some matters which occasionally arise for the Arbitrator's decision during the hearings.

First as to evidence:

Objection will often be taken to the form of questions put to witnesses. Their evidence should be confined to things of their own direct knowledge, and leading questions, that is questions which suggest the answer required by the interrogator, should be discouraged and disallowed by the Arbitrator if he is appealed to, particularly in the examination-in-chief.

Secondary, second-hand evidence, either verbal or documentary, should not be accepted unless first-hand evidence is unobtainable, as through the death of an intended witness or his inaccessibility, or the admitted destruction of original documents. An Arbitrator may refuse to accept exhibits or verbal evidence, but he should be very careful in doing so. He should know in general what constitutes evidence, and if in doubt about acceptance he should generally take an exhibit or hear a witness, telling the objecting party that he will form his own judgment as to any value attaching thereto. As to what is evidence it would be rash indeed for a layman to endeavour to give a short definition. Usually copies of letters and often of plans and other documents are accepted as a matter of convenience by both sides after mutual inspection, but if originals are called for by one side they should be produced if this is feasible. Signatures to documents are evidence without proof if 30 years old. Books of account are not evidence, though if produced, they may be used against the side producing them. Generally the counterpart of any document is not evidence in the absence of the document, thus an answer to a letter if objected to cannot be put in without the letter to which it is an answer. Again, certain matters, such as letters from a client to his solicitor, are privileged and cannot be demanded. The strict rules of evidence, however, are not always adhered to in arbitrations and anything approved by both sides may generally be admitted. Attempts are often made to withhold apparently legitimate evidence as being privileged or outside the scope of the reference. This may result in the application by opposing counsel for "discovery," which means that the whole of the documentary evidence available on both sides must be produced and exchanged. An Arbitrator should dis-

courage such a course as involving much expense and the reproduction of a vast amount of useless matter, but if pressed he will be wise to comply, which he does by writing to both sides (to the solicitors): "I hereby make an order for the production of all relevant documents in the case of ——— and ——— on the application of Mr. ———" (counsel applying). This, of course, will delay the arbitration considerably, and due time must be given for preparation and clerical reproduction of the material and its inspection by both sides, and it is well to allow the parties to intimate when they are ready for a further hearing.

More difficult is an application by one side to "state a case." This means an appeal over the Arbitrator's head to the High Court, and implies that the applicant either considers that the Arbitrator's view of the terms of reference is wrong or that he is including irrelevant or omitting relevant matters in the hearing, or—and this is always the ostensible reason—involving himself in a legal decision outside his jurisdiction. An Arbitrator may always state a case, he may do so on his own initiative, he *must* do so if requested on any point of law, but he should never do so on a question of fact. He must himself differentiate between law and fact and may dissect the application if facts appear to be involved, as they often are. Having agreed upon the terms of the case to be stated the solicitor for the party applying will generally undertake the legal formalities of transmission to the High Court, and until the Court's direction is obtained nothing more must be done. The Arbitrator must thereafter comply with the directions of the Court in all matters submitted to it. Stating a case should always be discouraged, the whole object of the Arbitration Act is to rid technical disputes of unnecessary legal formalities, and I have an instance in my own experience where such action obliged me to make an award much more against the applicants for such a case than I should otherwise have deemed fair.

Finally, as regards the hearings, a word as to the Arbitrator's notes. It is highly desirable that full shorthand notes of the whole of the evidence be taken, except in the most informal proceedings, for one never knows when some point may be challenged and reference be required. If either side wishes to make its own shorthand report it should be allowed to do so, and occasionally economy is effected by an arrangement whereby the Arbitrator and both sides have one reporter. Otherwise the Arbitrator should have his own reporter, and the method I have found usually satisfactory and economical is to have complete notes taken, taking at the same time my own jottings as the case proceeds of things which appear to be of special importance. Then after studying my notes I have the full shorthand report read over and only such parts transcribed (often quite a small part of the whole) which appear likely to affect the issue or which are required to

clear up any doubtful passages. The shorthand notes, however, are preserved until some time after the award is made and taken up, in case any question should arise requiring further authoritative production of the evidence. To a layman the common practice of the bench of taking voluminous longhand notes while the heavy expenses of both sides are running appears quite incomprehensible.

As already stated it is almost invariably necessary for the Arbitrator to himself visit the work in dispute and thus become acquainted with conditions on the actual site, unless both parties agree that this is valueless.

The Arbitrator may elect to view the work alone or with representatives of both sides present. Usually it is desirable to have someone present on either side unless the matter is very simple and straightforward, because certain work may not be easily identified without help, and often a foreman or other operative can be most useful on such a visit. Occasionally, of course, work may have to be uncovered for examination. Where measuring up is required the services of a surveyor may be essential, and any such appointment should be made independently by the Arbitrator and the costs paid by him and added to the costs of his award. If accompanied, the parties should each be allowed to express their views on items calling for explanation, and the Arbitrator should make such notes as will enable him to consider the opinions expressed afterwards.

THE AWARD.

Having dissected the whole of the evidence, the Arbitrator may proceed to make his award. To begin with, one matter which may occur during the hearings deserves notice. Pressure may be made for an interim award, perhaps on grounds that discussion on certain sharply defined questions is completed and that hardship will result owing to delays in making a complete award. An award must not be made in parts unless the Submission so directs, and if the Arbitrator draws the Submission he will do well to steer clear of anything in the nature of interim awards, which often complicate questions of costs and are apt to be seized upon by counsel as establishing some precedent obliging a certain course of action in the rest of the proceedings, which may lead to difficulties. Naturally if he has had to state a case upon part of the dispute his award may fall into separate parts, but it would require more knowledge of law than most laymen possess to successfully publish an award on part of an issue while the remainder was *sub judice*, even if the Submission allows this. If he likes, the Arbitrator may state his award or part of it in the form of a special case for the Court. For example, he may award certain things to one party if the Court takes certain legal views; generally, however, the method already referred to of asking the Court's view before making an award, if reference to the Court is requisite, is preferable.

An award must be made in three months from the time of entering on the reference, or before the expiry of this period the Arbitrator must write to both sides saying, "I hereby enlarge the time for making my award to ——"—any date he likes, and this process may be repeated. Should the time inadvertently run out without notice the period ought to be enlarged by an application to the Court, but the error may be condoned by both parties. It is seldom that a fair award can be reached by regarding the whole issue together. Each item of claim and defence should be separately adjudicated upon privately, and these issues then be summed up with proper regard to their varying magnitudes, so that the party succeeding shall be clearly evident.

An award must specifically find and direct, and it is not enough to propose or "be of opinion that." Further, a time should be fixed for the execution of the directions given, which might otherwise be indefinitely delayed.

There is a great temptation, anyhow, to one interested in this subject, to state in his award the reasons for the decisions arrived at, but nothing should be more discouraged, the actual findings should be as brief and concise as possible for an award should be a judgment not an argument, and, as has been pointed out from the bench, though the conclusions may be right the reasoning may be wrong.

On the other hand, an ample recitation is most desirable. This is a historical statement to show that the Arbitrator's appointment is in order and that he has conscientiously carried out all his duties, and will do much to prevent an award being upset. Thus the Arbitrator must state things well known to everyone but required to be recorded. For instance, that he has entered on the reference, examined the witnesses, viewed the work, enlarged the time for making his award, taken notice of objections raised by either side, and so on.

As to costs, the submission may give directions, but if not the Arbitration Act provides that these are to be dealt with in the award. Costs are sometimes much more important than the issue and counsel will often press that they shall follow the award, but the Arbitrator should never give any pledge to this effect, for a technical loss of the case may by no means always justify imposing all costs on the losing party. If a case is referred from the Court the costs to the time of reference, *i.e.*, the cause costs, may or may not be in the Arbitrator's jurisdiction. This he must ascertain from the Court.

The award may fix actual costs as sums of money or proportions of costs to be paid by each side, leaving the parties' solicitors to adjust these, but before proportioning these costs some idea of their amount should be clear in the Arbitrator's mind, and he may require legal advice on the subject. The Arbitrator's fees and expenses, *i.e.*, the cost of the award, should be included as part of the award, which precludes this item from being

taxed, but the amount should not be stated in the award, but in a letter to both sides stating that the award may be taken up on payment of such costs, and, as eventual payment is directed in the award, it does not matter which side pays for the award initially. The award must be stamped, and this is usually effected by the Arbitrator, who often sends a duplicate, unstamped, to the other party, merely as a copy after the original has been taken up.

Finally, the novice in this most interesting phase of the varied work which falls to the lot of an Architect will be well advised to cultivate a judicial frame of mind and to remember that the greatest pains to insure impartiality and attention to matters, often seemingly small, is essential for the successful conduct of an arbitration. He is entitled to seek legal assistance, and in the preparation of his award and other matters he will find such assistance of great value, more particularly until his experience matures.

Reviews

THE ART OF ILLUSTRATION. By Edmund J. Sullivan. (*Universal Art Series*.) £1 5s. [London: Chapman and Hall, Ltd.]

The field of the architect's draughtmanship covers, on the one hand, his wish to make a record of some particular achievement of the past, and, on the other, the presentation of what he would put before us as of his own imagining. It is in regard to both of these aspects of his art that he has every right to consider himself particularly addressed by Mr. Sullivan, and to seat himself along with those illustrators to whom the author is speaking. For, as Sir Reginald Blomfield says*, "Architectural drawing is not cut off from the world of art. . . . So far as art is concerned there is no essential difference between the drawing of a building and the drawing of a figure." We include ourselves amongst those for whom the author has so exactly and carefully defined illustration as being "any art that contains or suggests a reference to something outside itself to the extent that it depends for its interest upon that reference," and we approve of his further rider that "it is difficult to name a work, short of a meaningless pattern, that does not fall into the category" of illustration. It is not the concrete only, the content of which can be expressed in terms of art; an idea, no less than a fact, is capable of illustration.

To the architect, as to other artists, Mr. Sullivan points out that the treatment of that idea is as important as the idea itself, and that, as he says, the inward and spiritual grace can only be revealed by the proper ritual of a truly worthy outward and visible sign or manifestation. For it is often the function of the architect's method of expression to compel those to

* *Architectural Drawing and Draughtsmanship*, p. 90.

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whom he is appealing to share with him his vision and his dream, and he must do so in such plain and explicit language as shall speak best what he wishes to say.

It is here that Mr. Sullivan's book, the philosophic teaching of which is brightened by a play of humour and fancy, and by a pleasant personal touch, is of value as leading us, under him, to see how the masters of the art of illustration have left us the record of their methods of meeting the problems we are called upon to face to-day. A number of his chapters concern themselves with the æsthetic of the art, when in discussing such elementals as Object and Subject, Symbolism, Style, Truth to life, and Emotion, he arrives at an analysis of the essential principles of Art. Elsewhere he confirms his own personal statement with respect to the bearing of these on his subject by calling into the witness-box—as giving evidence in support—such illustrators as Botticelli, Blake, Doré, Millais and Beardsley.

The many illustrations in the work help the author to bring home his points. Perhaps, however, amongst the list of over 100 which he has selected one may notice an over-plus of examples drawn from one particular artist—say, for instance, those by Blake, appeal to whose work, in order to point a required moral, is so frequently made. It is easy to realise the self-denying ordinance that Mr. Sullivan had to respect in the selection of his illustrations of illustration. We may congratulate ourselves on the fact that our own Library can give his principles and deductions most useful support in the examples it possesses of the work of that admirable and too-little-known school of seventeenth century Italian draughtsmen, of whom the successive generations of the Bibiena or Galli family may be taken as typical. These beautiful drawings are notable instances of the work of the architect-illustrator. Usually executed in line, or in line and wash, they re-inforce in their clearness, alike of thought and execution, the demand made by Blake and quoted by Mr. Sullivan for the adoption of the "great and golden rule" that the distinct line is the basis of all perfect art." Most architects would accept that aphorism, rather than hold with Professor Rothenstein, who, in his recent address to the Institute, declared that "the architect is attracted by looser, painter-like things" than the painter. "Drawing," says Blake, "is execution and nothing else. He who draws best must be the best artist."

Good architects are generally good draughtsmen, Sir R. Blomfield has told us, and he cites in support such names as Bramante, Peruzzi, San Gallo, Palladio and Inigo Jones of the older men, Cockerell, Burges and Waterhouse of our own time. Largely, but not necessarily always, depending on the pen and its "distinct line," their work—either record of the past or a presentation in visible form of the gift of their imagination—is always an impressive illustration. The draughtsmanship of these artists illustrates, fully and

yet concisely, their intention. To them it is a means of expression and not an aim.

As regards that means of expression of the illustrator, his technique and method, several of the thirty-seven chapters of this volume come to us with the weight of a master of the art of illustration, and deal with a consideration of its practical side. To Mr. Sullivan there are here no "trade secrets," no methods of his own kept jealously to himself. He recognises how, when restricted to the use of the single line, and depending on it for the quality of his drawing, the draughtsman can gain by advice as to what actual means to employ to obtain that quality and its vitality of interest. He goes so far into the details of this advice as to give counsel with regard to the selection of the fit and proper pen, and finishes a comparison of those he has found most helpful by casting his vote in favour of Brandaur's 518—a "most exciting and wonderful pen," and one which "for richness or fineness has no equal." The nature of the paper to be used is considered according to quality desired in the proposed line—fine, unbroken and close, or heavy and full. Again, in treating of inks best suited for purposes of pen-illustration, the experience of the author leads him to make a somewhat new departure in advocating the use of Stevens's Ebony Stain in preference to any make of the Chinese or Indian inks usually employed.

In conclusion, we have to thank Mr. E. J. Sullivan for a very useful volume dealing with an art in which he is recognised as an eminent leader, and, further, to feel grateful to him not only for the counsel and teaching, but for the literary grace with which he has clothed them.

C. HARRISON TOWNSEND (F.).

FIRE PREVENTION AND FIRE PROTECTION AS APPLIED TO BUILDING CONSTRUCTION. By *Joseph Kendall Freitag*. *Original edition, 1912. Second edition, revised. [Publishers: Chapman and Hall, 1921.]*

A second edition of this well-known American book has recently been issued. The original edition of 1912 was such an exhaustive and comprehensive treatise on the whole subject of fire-resisting design, construction, and equipment that it speedily became a standard work on the subject not only in America but also in this country; and authorities here such as the London County Council have acknowledged their indebtedness to its value when compiling their regulations.

In the preface to the present edition the author states that many revisions have been made in the attempt to keep the book up to date; this, however, is hardly borne out in a comparison of the two editions. The chapters dealing with theatres and garages have been largely rewritten, but by far the major portion of the original edition has been left untouched. Although the original edition is barely ten years old, methods of fire-

resisting construction and design and the fire equipment of buildings are progressing so rapidly that what was the last word ten years ago is now largely out of date. The author's excuse, however, is that, owing to the war, building construction has not progressed during the last few years at the same rate as in previous decades, and there is no doubt some truth in this argument.

In the original edition one of the most valuable and informative chapters was that dealing with fires in fire-resisting buildings. In the new edition this chapter has merely been reprinted, and no examples of fires occurring after 1911 have been added; unfortunately, although methods of building construction may not have progressed very rapidly in the last few years, the toll of fires has not stood still during this period, and this chapter should most certainly be revised and brought up to date.

In the chapter on materials of fire-resisting construction one or two recent processes are not referred to; for example, no mention is made of the "oxylene" process of timber fireproofing; also only a passing reference to the electrical deposition of copper on small squares of plate glass (known in this country as electro-copper glazing), a type of fire-resisting glazing very largely used where wired glass would look unsightly.

No reference is made as to the behaviour of unencased solid steel columns in a fire; this information would be of value, as the use of such steel columns is largely increasing in this country, especially in shops and showrooms, where every inch of floor space is of value.

No revision has been made in the annual fire losses subsequent to 1909, and all reference to comparative costs has been omitted, the reason given by the author being that up-to-date comparisons of cost are of little value owing to the fluctuations in costs due to the war. One rather feels, however, that this information has been left out owing to the great labour involved in revising the figures in the book. Should the author contemplate a further revised edition in a few years' time, as it is hoped he will, comparative tables of fire losses to date should certainly be inserted, as it is only through such comparisons that one is able to ascertain whether the losses by fire in every country are gradually diminishing year by year through the instrumentality of modern methods of construction and of fire attack.

As the book is written by an American essentially for American practice, a large number of the references naturally do not apply to English methods of construction; it would be of immense value to English architects and engineers if additional chapters could be added with special reference to British constructional practice. For example, concrete floors having a broken brick aggregate appear to be practically unknown in America, possibly due to the lack of brick buildings in that country. DICKY L. SOLOMON, B.Sc.Lond. [A].

THE JOURNAL OF HELLENIC STUDIES

Vol. XLI—Part II. 1921. [London: Macmillan & Co.]

There are no articles on architectural subjects in this number. Mr. Gilbert Baguani gives a description of statues of the Hellenistic age which have been discovered during the excavations carried on at Cyrene by the Italian Government. Mrs. Van Buren has a paper on Archaic terra-cotta votive statues in Italy and Sicily. We are glad to have illustrations of some of the fragments from Veii and of the fine head of Zeus from Satricum. This article is a useful supplement to M. Deonna's "Statues en Terre-Cuite." There is also a study by Sir Arthur Evans of a Minoan bronze group of a man and a bull which illustrates the sport of the Taurokathapsia. Besides these there are articles by M. M. Holleaux, the late Mr. Hasluck, Professor Ure and others, on various subjects, mainly of historical interest. Perhaps Mr. Wace's summary of the excavating and other archaeological work done during the past two years by the Greek Government and the various Schools is the most inspiring. If nothing of first-rate importance has been discovered (except, perhaps, the Odeion of Pericles), the record is full of promise and proves again, if proof were needed, the absurdity of the pronouncement that Greece is an exhausted field for excavation and research.

H. C. BRADSHAW [A].

ACADEMY ARCHITECTURE AND ARCHITECTURAL REVIEW. *Vols. 52 and 53. Edited by A. E. Martin-Kaye. 80. Lond., 1921. 10s. [London: Batsford.]*

The publication of these useful annual volumes which was suspended during the war has been resumed. The present volumes give selections of prominent drawings at the Academy Exhibitions of 1920 and 1921, and, in addition, an architectural review of current work, including interior domestic architecture, garden architecture, cottage homes and housing schemes, offices, business premises, theatres and cinemas. In volume 21 forty pages are devoted to illustrations of Mr. Robert Atkinson's Regent Theatre, Brighton, giving plans, sections, details and both drawings and photographs of views of the interior. The Royal Free Hospital, London, out-patients' department by Messrs. H. V. Ashley and Winton Newman is also amply illustrated in the same volume. Mr. Kaye-Parry, the proprietor and editor of *Academy Architecture*, is to be congratulated upon the improvements which he has effected in the arrangement, and perhaps more especially, in the more complete illustrations such as those of the two buildings we have mentioned, as well as those of Sir John Burnet and Partners' Adelaide House, and Messrs. Mewés and Davis' London County Westminster and Parr's Bank. The sections devoted to garden architecture and sculpture are also well illustrated with various examples of interesting work. W. P. STEEL.

HISTORIC HOUSES OF SOUTH AFRICA. By Dorothea Fairbridge, with a preface by General J. C. Smuts. 40, Lond. 1922. £3 3s. [London: Humphrey Milford.]

South African domestic architecture is almost wholly unknown to the English architect whose travels are limited to the Continent of Europe.

Miss Fairbridge's book on the old Dutch Colonial work in South Africa gives us, therefore, not only interest but some astonishment at its variety, beauty, and extent. The photographic illustrations in the book are good, but nothing could give the effect of these charming country homes to greater advantage than the coloured reproductions of the paintings by R. Gwelo Goodman, which will give delight to every lover of colour.

The stuccoed buildings with their scrolled decorated gables and thatched roofs, the great trees throwing deep shadows across them, and an occasional glimpse of blue showing through the bark boughs, give the impression of cool seclusion, not without dignity.

Architects who have considered the question of transporting European domestic styles to the South American republics, will welcome this book as giving them the historical precedent of a style so transported and modified to suit the conditions of climate, material and labour, the only parallel to which is the Spanish Mission style in California, Central and South America. The student will be interested to compare the Cape Dutch style with the American Mission style and to observe results of the Spanish influence in both styles.

It is evident that Miss Fairbridge has thoroughly studied the whole subject in all its branches, for nothing is omitted—the history of the old Dutch families, their homes, churches, paintings, gardens, furniture and decorative arts.

To conclude, there is a chapter on the land itself—its fields, flowers and fruits, which appeals strongly to the travelling spirit of the architect. But in these lean days his wisest course is to buy the book. It is a good book, well arranged, well printed and well bound, but somewhat expensive. Perhaps a cheaper edition will be produced, not omitting the coloured plates.

C. D. CARUS-WILSON [A].

The Library

VON SPANIENS ALTER BAUKUNST. By Hermann Wurz, 40, Munich, 1913. 3s. [Georg Müller und Eugen Rentsch, Munich.]

A fascinating little volume, giving a good pictorial introduction to some of the better-known historical buildings of Spain. It is a pre-war publication, produced with German thoroughness, and with rather more artistry than many of the books emanating from the same country.

S. C. R.

THE VOLUTE IN ARCHITECTURE AND ARCHITECTURAL DECORATION. By Rexford Newcomb, 80, Urbana, 28. 9d. [University of Illinois, Urbana—Bulletin No. 121.]

This pamphlet gives a concise historical summary of the forms which the volute has assumed both in classic and mediæval times. The author, who is assistant professor of architectural history at the University of Illinois, contends that the volute is a decorative and symbolic form employed universally in the arts, and he combats the theory of its constructional development in the Ionic capital. The illustrations are numerous and well produced.

A. T. E.

FORM IN CIVILIZATION. By W. R. Lethaby. 80, Lond. 1921. 3s. 6d. [Oxford University Press.]

This is a collection of essays, written at various times, but now published in one volume. Some are dated so long ago as 1896, others are as recent as 1920, but all are full of the refreshing, original thought which Professor Lethaby invariably brings to the consideration of all matters of art and work and life.

W. H. A.

The "Italia Artistica" Series of Illustrated Monographs on Italian Towns. Edited by Corrado Ricci. La. 80, Bergamo. 4s. 6d. each. [Istituto Italiano d'Arti Grafiche, Bergamo.]

TERRACINA E LA PALUDE PONTINA. By A. Rossi. 170 illustrations. La. 80, Bergamo, 1912.

Deals with the towns of the district of the Pontine Marsh, 60 miles from Rome.

IL TALLONE D'ITALIA. By G. Gigli. 150 illustrations. La. 80, Bergamo, 1911.

The "heel of Italy," and such towns as Gallipoli, on the Gulf of Taranto, and Otranto.

ASCOLI PICENO. By C. Mariotti. 170 illustrations. La. 80, Bergamo, 1913.

A fortified town, little visited, but of much picturesqueness, some 120 miles from Rome.

DA GEMONA A VENZONE. By G. Bragato. 178 illustrations. La. 80, Bergamo, 1913.

Deals with the district between these two towns, some 70 or 80 miles north-east of Venice.

SPELLO, BEVAGNA, MONTEFALCO. By G. Urbini. 105 illustrations. La. 80, Bergamo, 1913.

Not very often visited places, though within an easy reach of Perugia, with at Spello some beautiful frescoes by Pinturicchio.

L'ISOLA DI CAPRI. By E. Pettracone. 130 illustrations. La. 80, Bergamo, 1913.

This volume has but little of architectural interest to note, except the well-known Villa di Giove.

BOLOGNA. By G. Zucchini. 170 illustrations. La. 80, Bergamo [1913].

L'ARCHIPELAGO TOSCANO. By J. La Bolina. 86 illustrations. La. 80, Bergamo, 1914.

Elba and the adjacent islands.

L'ISTRIA E LA DALMAZIA. By Amy A. Bernardy. 226 illustrations. 80, Bergamo [1913].

A useful volume, treating fully as it does of the Dalmatian Islands, as well as of the main coast cities—Spalato, Zara, Ragusa, etc.

A further addition to the "Italia Artistica" series, of which the Library now has 35 volumes. Each of the excellently illustrated volumes deals with a town or city of Italy, and the books are, in many cases, of especial use, due to their giving information as to various little-known places worthy of a visit.

C. H. T.

Unification in the Architectural Profession

THE FOLLOWING STATEMENT ON UNIFICATION IN THE ARCHITECTURAL PROFESSION
IS ISSUED BY THE COMMITTEE ON UNIFICATION AND REGISTRATION

Unification means a grouping into an organic whole within the Royal Institute of British Architects of (a) the entire (professional) member-roll of the Society of Architects, which will cease to exist as a separate body; (b) the entire (professional) member-roll of the Architectural Association and of the Allied Societies of the Royal Institute (each Society maintaining its name and entity); (c) architects, properly so-called, under proper conditions of qualification, who are at present unattached to professional Societies.

[N.B.—Until Unification has statutory force, in the form of Registration, the inclusion of these unattached architects will necessarily be dependent on the option of these architects themselves, who it may be premised will not decline the advantages which inclusion will obviously offer.]

Details of the status in the R.I.B.A. to which the present grades of membership in the Society of Architects would be admitted, though not yet precisely defined, are already provisionally outlined to the satisfaction of representatives of the Councils of both bodies. The admission of unattached architects, while conferring on them such a status as will offer them most valuable advantages, will not derogate from the prestige and interest of those existing members whose membership of the R.I.B.A. is based on qualification by examination or other tests.

The advocates of constructive Unification never lose sight for a moment of the relation of this movement to Registration. They regard Unification as a preliminary step without which Registration is a mere vision and as a stage in the evolution of Registration which will add incalculable value and force to Registration when finally the latter is obtained. In other words, Unification has a double value. It is an end in itself—actually within grasp and well worth attainment even if Registration be remote.

And, besides this it is a means, and an essential means, to Registration.

UNIFICATION may reasonably be looked on as the method whereby every worthy and bona-fide Architect in the United Kingdom:

1. Can actually and actively co-operate with his professional *confrères* in the advancement of ARCHITECTURE by a direct interest in the R.I.B.A., and thereby assist the laudable objects for which the R.I.B.A. was founded.
2. Can have a direct voice and share in the education, management and control of the profession.

3. Can contribute to and share in the advantages to be gained from a profession united in, represented and led by a single Body of properly constituted authority and unquestionable pre-eminence, such advantages including, *inter alia*, improved prospects of obtaining Statutory Registration.

UNIFICATION DOES NOT INVOLVE

The inclusion within the ranks of the R.I.B.A. of any person engaged in any other vocation than that of an Architect or Architect and Surveyor.

UNIFICATION IS DESIRABLE:

1. Because the Institute so constituted would become numerically larger than any existing bodies and thereby proportionately more influential, thus enabling the practical removal of many of the now prevalent abuses and anomalies of practice, by the more extended application of the Charter, By-laws, Regulations and Edicts of the R.I.B.A., and in particular of its Code of Professional Practice and of its Scale of Professional Charges.
2. Because the R.I.B.A. would be strengthened by the direct interests and opinions of those trained outside, with whom it is at present only remotely in touch.
3. Because it will put the re-formed R.I.B.A. in a position to speak indisputably and conclusively for the profession as a whole, which legal advice has indicated as an essential position to secure the concurrence of Parliament to the terms of any Registration Bill promoted by the R.I.B.A.
4. Because it will enable the R.I.B.A. the better to carry out the objects for which it was founded; and the work which it has initiated and is fostering for the improved professional position of Architects by the wider field wherein its activities can be employed, and will thus materially strengthen the power of the R.I.B.A., enhance the value of its work and raise its prestige.
5. Because it will provide facilities for—
 - (a) The provision of an organisation whereby speedy and effective action can be taken on all matters of professional interest and importance.
 - (b) The expression of the decision and opinion of the whole profession in agreement or difference with the Government and its Departments, County Councils and all other Public Authorities, Companies and Bodies.

- (c) The support, protection and defence of the professional interests of Architects and the establishment and maintenance of proper etiquette within the profession.
- (d) The promotion of systematic architectural education and the Statutory Registration of Architects.
- (e) The maintenance of proper relations with other organisations in all matters relating to building.
- (f) The education of the public to an appreciation of Architecture by press publicity and other means.
- (g) The undertaking of all other lawful acts required to carry out the foregoing objects.

By rejection of Unification, Architects would be reconciling themselves to an indefinite continuance of the present-day conditions and fratricidal polemics of the last generation, by which opportunities for improving the Architect's lot have had to be ignored or have been lost, and the cause of Architecture has suffered accordingly.

IT IS OBVIOUSLY OF VAST IMPORTANCE TO THE ENTIRE PROFESSION THAT WHEN REGISTRATION IS AT LAST ACHIEVED, IT SHALL FIND THE ARCHITECTURAL PROFESSION IN A STATE OF ORGANISED UNITY.

Any Policy advocating Registration without prior Unification :

1. Might deprive the profession of the advantages to be gained by Unification.
2. Does not assure that the R.I.B.A. will remain the authority controlling the profession.
3. Makes it certain that the R.I.B.A. will either be :
 - (a) Relegated to an inferior and subordinate position, or,
 - (b) Subjected by Parliament to an overhaul of its constitution and Charter rights, when it will have necessarily but little say as to the manner in which outside Architects are to be admitted to it.

PAUL WATERHOUSE, President of the Royal Institute of British Architects, *Chairman*.

EDWIN J. SADCROVE, President of the Society of Architects, *Vice-Chairman*.

ARTHUR KEEN, Hon. Secretary R.I.B.A., *Hon. Sec.*

[N.B.—A Minority Statement signed by certain members of the Committee will be issued as soon as possible.]

Higher Buildings for London

By W. E. VERNON CROMPTON [F.].

The desirability or otherwise of high buildings in London is not a matter that can properly be considered by itself. The question is only part of the large category having to do with congestion, it being impossible to separate congestion due to domestic or commercial housing, etc., from congestion due to traffic on the streets. Congestion does not consist of two problems separated from one another by watertight compartments, but one problem of which the problem of high buildings forms an important part. This is the reason why the consideration of London traffic is inseparable from any discussion as to higher buildings, it therefore will be to the point to give a small résumé of what has happened during the last 20 years or so with reference thereto.

In 1903 the Government, realising that the traffic problem of London was becoming increasingly difficult and likely to get beyond control, appointed a Royal Commission, whose report in 1905 disclosed a somewhat critical state of affairs.

To continue the work of the Commission, annual reports were issued by the Board of Trade between the years 1908 and 1914, with which the name of Colonel Hellard is associated.

In 1914 and 1916 arterial road conferences took place with a view to bringing the local authorities in the various districts around London into line.

In 1919 a select committee on transport (metropolitan area) was appointed by the Government. Although collating a great deal of useful information, practically nothing has been done, and very little organisation has taken place.

At present things appear to be at a standstill; meanwhile the problem that was difficult in 1903 became worse at the beginning of the war, and is now intolerable.

In proof of these assertions which, however, are common knowledge and common experience to the man in the street, the following approximate figures will be of interest :

Year.	Population in millions.	Passengers carried in millions.	Journeys per head.
1902	over 6½	over 900	138
1912	over 6½	over 1,700	244
1921	nearly 7½	over 3,000	400

showing that there has been an increase of 300 per cent. in traffic during the last 20 years, during which period there has been something of the nature of a boom in the four means of travel in London.

1. Six tubes were formed between the years 1890 and 1907.

2. Motor 'buses supplanted horse 'buses during the period about 1907 and 1908.

3. The trams were greatly extended and electrified somewhere about 1908-1909.

4. Considerable lengths of suburban railways were electrified.

It is therefore a disquieting fact that with this very con-

siderable increase of facilities it was just possible to keep our heads above water, but now we appear to be at the end of our tether as regards expansion, at any rate for a period, except perhaps with the exception of some further electrification on railway lines.

A second disquieting fact is to be observed from these figures—namely, that the greater the facilities the greater the congestion—thus we seem to have the vicious circle cropping up with reference to the traffic problem just as it seems to crop up invariably in most of the problems of our civilisation. This vicious circle can only be broken by creating facilities so as to absorb congestion, consequently the figures I have mentioned above are figures representing a repressed activity, and not a free activity such as it would be the endeavour of a reasonable civilisation to provide.

The above are the salient points in a meagre summary of the present position of the traffic problem in London, and in attempting to bring these points into definite relation with the amendment moved by Mr. Delissa Joseph on 6 March, three points arise for consideration :

1. The facilities for expansion of building accommodation are by no means used up under the Act of 1894. In proof of this the following approximate figures with reference to heights of buildings in St. Mary Axe may be of interest. St. Mary Axe is a typical commercial centre, it is the address of the Baltic, and is full of shipping offices, a shortage of which particular accommodation is recognised :

Type of Building.	Length of Frontage.	Percentage.
Vacant land	50 feet	3.00
Under 40 feet and one storey ..	225 ..	14.25
.. 50 feet	205 ..	13.00
.. 50 feet and one storey ..	390 ..	24.75
.. 50 feet and two storeys ..	90 ..	5.50
.. 60 feet	215 ..	13.75
.. 60 feet and one storey ..	405 ..	25.75
	1,580 feet	100.00

The frontage of St. Andrew's Church is neglected.

From the above table it will be seen quite clearly how much further it is possible to expand the accommodation in St. Mary Axe under the present Acts. But if expanded in this and in similar thoroughfares it would lead to worse confusion with regard to traffic, and I refuse to contemplate the result of buildings 120 feet high, exclusive of two storeys in the roof, to be put up without reservation, other than L.C.C. control, in St. Mary Axe, as contemplated in the Scheme Section 1, subsection 3, a proposal that I understand is now withdrawn.

2. Section 47, Building Act, 1894, is one of the restrictive factors governing the value of property. It is universal, and therefore just ; but the scheme propounded by the Building Act Committee suggests a preferential treatment for certain sites (see the scheme, Section 1, subsection 2) which is tantamount to a gift to the owners of such sites.

Should this preferential treatment ever come about, continuous pressure is sure to be exerted by those who hold property not dowered with this preferential treatment, to be put on to the same basis, for it is quite possible that sites being adjacent and of equal value to-day, would, if the scheme were adopted, become of unequal value to-morrow.

Should the scheme as drafted come into operation, it must be regarded merely as the thin end of the wedge, in which case I should not be surprised if in ten years' time a meeting were convened at the Institute for the purpose of making universal what was then preferential, for the simple reason that preferential treatment is unjust.

When these points are brought into relation with the traffic problem it will be seen that restricted permission for high buildings with an accompanying increase of traffic must eventually, as a matter of justice, be made possible to all with consequences to the traffic of London hardly to be conceived.

3. It must be appreciated quite clearly that we are not dealing with a public body acting for the common weal : the proposal is quite different ; it is palpably a move by Big Business accustomed to the control of millions, for whom dividends are essential, and with whom the public service, however urgent and obvious, is merely adventitious.

The question therefore naturally arises, Why should these private interests purely for their own profit and advantage be permitted and add their quota to the existing traffic chaos ?

The answer would be interesting.

Franco-British Union of Architects

SECOND ANNUAL GENERAL MEETING AND VISIT TO PARIS.

The programme for British members taking part in the visit will be as under :—

Thursday, 11th May.

Members will leave London (Victoria, S.E. & C.R.) at 11 a.m., for Paris, arriving at 6.49 p.m.

Friday, 12th May.

Morning free.

3 p.m.—Séance-Générale de l'Union, 59, rue de Grenelle. On the termination of the meeting members will be entertained to a " thé intime " by the S.A.D.G.

Saturday, 13th May.

Morning free.

5 p.m.—Visit to the Salon by invitation of the Société des Artistes Français. Members will meet at the principal entrance Avenue Alexandre III. at 4.50 p.m.

7.30 p.m.—British members will be entertained to dinner by the President and Council of the S.A.D.G.

Sunday, 14th May.

British members return to London.

The headquarters of the British Section, while in Paris, will be at the Hotel Lutetia, Boulevard Raspail, where special terms have been arranged for members.

Mr. S. Douglas Meadows [A.] has accepted the appointment as Chief Architect to the Municipality of Singapore, and has, therefore, resigned his appointment as Superintending Architect to the Ministry of Agriculture and Fisheries.

The Royal Academy Banquet

SPEECH BY SIR ASTON WEBB, P.R.A.

Sir Aston Webb, the President, in responding to the toast of the Royal Academy at the Annual Banquet held on 30 April, said in the course of his speech :

You will see signs of movement as you go round our present exhibition, which I hope you will think—as we do—is an unusually good one. There are pictures and sculpture here to-day which will, we believe, be recognised as masterpieces later on. We are endeavouring to encourage sincere effort in whatever school it may be expressing itself, and to embrace in our membership all who have something to say that is worth saying. In doing this we are aware that we lay ourselves open to criticism from those who find little or nothing to admire in the work of the more adventurous artist ; but an academy, if it is to live, must live with living men, and while rejecting and declining to recognise excess and extravagance must, on the other hand, show sympathy with aspirations which at first sight may seem strange and perhaps unacceptable, whatever the verdict of posterity may be.

The Archbishop of Canterbury some years ago made the suggestion in this room that the walls of our public buildings should be more freely enriched with mural decorations, as they are abroad, with the result that the walls of the Foreign Office grand staircase were offered by the Government for the purpose, and these decorations have lately been completed and put up, and can be seen by those interested.

We are proposing next winter to have an exhibition of decorative work, and have already received offers of wall space in certain public buildings available for decorative treatment. Our schools under our Keeper are full and doing very fine work indeed, and are still improving. An agreement has been come to on the long-outstanding question between the R.A. Council and the Tate Gallery Trustees concerning the purchase of pictures under the terms of the Chantrey Bequest which has received the assent of the Treasury and the Chantrey Trustees. The Treasury have appointed four additional executant artists on the board of the Tate Trustees, and it is hoped the arrangement will prove a permanent settlement.

We have had an application from Sydney for the use of one of our galleries during our summer exhibition for the exhibition of modern Australian pictures, and though we found ourselves unable to arrange this, we have offered to Sydney two or three galleries in the autumn if it can be arranged. We are now lending our beautiful rooms and galleries for all purposes that seem to us likely to be in the interest and advancement of art, irrespective of party or school ; and we are using our best endeavour that the Royal Academy shall worthily maintain its position as the head of the arts in this country.

I should like to refer to the proposal that has been made to erect buildings in London 120 feet high irrespective of the width of the streets. In the City, with streets 20 to 25 feet wide, you may imagine what the effect would be.

That is one of the subjects which we would wish to place before an Advisory Commission on Fine Art. It is true that such a Commission would have no executive power, but they would be men of authority on such matters, and could express an opinion which we believe would stop at once the carrying out of any proposal of that sort. At the moment I believe we have stopped that proposal.

R.I.B.A. CONFERENCE AT CARDIFF.

The present number of the JOURNAL contains an article by Mr. Purchon on the Public Buildings in Cardiff, which will be of special interest to members attending the Conference there from 8 to 10 June. The programme of the Conference was published in JOURNAL No. 10, p. 307. The Lord Mayor, who will hold a reception at City Hall on the opening day, recently described the prospective Conference as the chief civic event of the year.

EXHIBITION OF DRAWINGS OF ARMENIAN ARCHITECTURE.

The following letter has been received from Major-General Bagratouni, the representative for Armenia in London, in connection with the recent exhibition of Mr. Fetvadjian's drawings held in the Institute Galleries :—

SIR,—Permit me to express on behalf of my compatriots our deepest gratitude for your benevolent attention and the arrangements which were so kindly made for the exhibition of the drawings of Mr. A. Fetvadjian at the Royal Institute of British Architects.

As Armenians we are very proud, and it is a great honour for us, that the works of our prominent painter should have been exhibited in such a distinguished Institution and appreciated by its President and the Council.—I am, Sir, your obedient servant,

J. BAGRATOUNI,
Major-General.

EXHIBITION OF SEVENTEENTH-CENTURY ARCHITECTURAL DRAWINGS.

The attention of members of the Institute is particularly directed to the exhibition of the Coke collection of Smithson drawings, and Sir Vere Isham's collection of Webb drawings, now being held in the large gallery of the Institute. A catalogue of both collections, compiled by Mr. J. A. Gotch, has been printed. Mr. Gotch has kindly consented to give an address on the drawings on Thursday, 11 May, at 5 p.m., at which it is hoped there will be a good attendance of members and their friends.

ARCHITECTS BENEVOLENT SOCIETY.

The annual general meeting of the subscribers and donors of the Architects' Benevolent Society will be held, by the kind permission of the Council of the R.I.B.A., at 9 Conduit Street on 10 May. The President (Mr. Paul Waterhouse) will take the chair at 5 p.m.

The late J. B. Fulton [F.]

By PROFESSOR BERESFORD PITE.

A quarter of a century ago Fulton was an irresistible victor in students' competitions, both in draughtsmanship and design. Nature had provided him with gifts and a judgment that seemed exactly suited to the artistic mood of his generation, and these gifts were supplemented by strength and capacity for great rapidity in execution. So he swept the competition board of all the available student prizes. His record in this respect is probably unequalled.

The measured drawings of woodwork screens at Aberdeen first attracted attention to his novel, clear and seemingly nervous draughtsmanship, but the nervous quality was that of feeling, not of hesitancy. Later studies abroad, especially his sketches of Constantinople, proved that his hand reflected forcibly and certainly all that he wished to express. There must be a stock somewhere of his sketches and studies of Sta. Sophia, besides the few that have been published, as he had expressed his intention of publishing a big work on Santa Sophia some day, and he generally gave the impression of having much information in reserve waiting to be drawn out of his mind and stores.

In design he possessed the quality of breadth of vision and comprehension of difficult problems of planning that stood him in good stead in public competitions. He had very many successes in obtaining selection for limited competitions and second places in finals, though relatively few first places. In the London County Hall competition and the Government offices, Whitehall, he scored successes with great sets of plans executed practically wholly by himself. In these designs the power of the plan illustrates the modern Roman renaissance method of corridor and public hall arrangement that he conceived rightly to be popular. The outlook was perhaps limited, but the concentration on what was sure to appeal to the assessor as modern and practical never failed or drifted into merely imaginary design. In the detail of the plan his work was seldom at fault, and the Gordian method of cutting constructional problems was never absurd and could always be made to work, perhaps unconventionally. Mr. Belcher nominated him for some of the blocks of buildings at the White City, and the opportunity of indulging in frisky French *patisserie* was seized by Fulton with avidity. The unsatisfactory results, due to temporising expedients in construction, prevented these characteristically clever buildings from ranking as works of architecture, but among the experiments in sketchy magnificence which these Exhibition sheds with palatial façades exhibit Fulton's work held its own.

For nearly 12 years Fulton was associated with me in the work of the Architectural department of the L.C.C. School of Building at Brixton. His patient kindness of character and equable temperament did wonders among the varying types of students. Quite a considerable number of successful men can now look back to the immense stimulus that his evening tuition gave after a dreary day's work in an office. Clever boys responded rapidly and

learnt his method in a remarkable way, but the outstanding feature of his long association with this school was his success with unpromising material. I have often wondered at the way in which his long patience overcame obstacles that would have been insuperable to a teacher less optimistic and kind. He knew exactly how to impress the method by which he perceived a problem of design upon his pupil, and the result was as often astonishing to the subject of his instruction as to me.

All this is testimony enough to the worth of Fulton's character as a teacher; as a friend and colleague he was invaluable. Naturally very reserved and extremely modest, there was never any failure in his quiet confidence in his own judgment and power. During the war his health broke up under the strenuous training for the field—he steadfastly refused to apply for a commission—and after its re-establishment, as we all hoped, his appointment to the very important post at Glasgow gave the great opportunity for which he was eminently fitted, together with the joy of being in his native air. I had the great pleasure of seeing him in his new sphere early in 1921 and of observing the enthusiasm with which he was welcomed. Too soon he broke down, and after many months of convalescence was suddenly called away. The sympathy of the very large circle of professional men to whom for many years he had been a helper and a stimulus will be accorded to his widow and his son in their sorrow. May the assurance that the high regard in which his great talents, genuine character and lasting work are held in some small measure be a solace and an abiding recollection.

Mr. Edward G. Wylie [A.] has sent the following note on Mr. Fulton's work at Glasgow:—

The late Professor J. B. Fulton was appointed the Director of Studies to the Glasgow School of Architecture in 1920.

Commencing these duties in September 1920 he at once proceeded to initiate a series of changes in the courses of study with a view to increasing the efficiency of the School and bring the curriculum of studies to as complete a state as is possible for the education of architects.

During the session 1920-21 the School was admitted as a recognised school by the R.I.B.A., whereby its diploma exempted the holder from the examinations for Associateship. In this Professor Fulton was largely interested.

The success of the first session of the School under his direction was apparent, and it was confidently hoped that the success would be more marked as time went on, but unfortunately just at the end of the session he was taken seriously ill.

From this illness he was gradually recovering and was looking forward to resuming his duties, but while attending a medical board in Glasgow on 11 April, he had a second seizure and died the same day without recovering consciousness.

* * * Mr. Fulton was Tite prizeman, 1899; Institute Medallist (Drawings), 1900; Soane Medallist, 1902; Grissell Medallist, 1903.

Obituary

FREDERICK WILLIAM MARKS [F.].

Mr. Marks, who died on 2 April, was a much-respected Fellow of the Institute. After passing the examinations he was elected an *Associate* in 1887, and a *Fellow* in 1905. He was the son of the late Jacob and Susannah Marks, of Sydney, New South Wales, and spent much of his early life in Australia. He was regular in his attendance at the Institute meetings and served for some years on the Practice Standing Committee. Amongst the buildings of which he was architect is Egypt House, New Bond Street, a memorial in Devonshire, and at the time of his death he was engaged on a large block of buildings for an insurance company in Moorgate Street. He was very musical, and his taste was shared by Mrs. Marks, who is an expert amateur pianist. His loss will be greatly felt by his many friends at the Institute, and much sympathy has been expressed for Mrs. Marks and the members of his family.

SYDNEY PERKS [F.].

THE LATE MR. GEORGE E. HALLIDAY [F.]

Mr. George Eley Halliday, F.S.A. [F.], a well-known Cardiff architect, died at Cardiff on April 5, aged 64 years.

Mr. Halliday was an authority on archaeology, and his works on Church plate and other treatises have been in great demand by those interested. He was also an authority on ancient works and remains throughout South Wales, particularly those at Caerwent and Llantwit Major. He came to Cardiff after serving his pupilage in London, and was for some time an assistant to Mr. John Pritchard, the architect for the restoration of Llandaff Cathedral. As an architect he was most successful, carrying out his works with rare skill and devotion.

Mr. Halliday was president of the South Wales Institute of Architects during 1911-1913. Amongst the numerous works executed by him may be mentioned St. Teilo's Church, Cardiff; All Saints' Church, Porthcawl; Christ Church, Radyr; Caerphilly Church Tower; St. Mary's Church, Barry Dock; Llantwit Major Church restoration; Howells' Schools, Llandaff; the Llewellyn Almshouses, Neath. The practice will be carried on for the present by Mr. Chris J. Ward, F.S.I., L.R.I.B.A., at Cefn Mably Chambers, 9, Quay Street, Cardiff.

IVOR P. JONES [A.].

Hon. Sec., South Wales Institute of Architects.

THE LONDON BUILDING ACTS COMMITTEE

The Council have directed that the following letter be printed in the JOURNAL of the Royal Institute:—

London, 20 February 1922.

To the Editor, JOURNAL R.I.B.A.,—

DEAR SIR,—The Building Acts Committee of the R.I.B.A. was appointed by the Council to consider the question of the reform of the London Building Acts, and the members of that Committee were presumably selected by the Council by reason of their being peculiarly qualified to advise on the subject.

The Committee, realising the extensive character of the task which had been allocated to them, decided, in the first instance, to deal with the question of higher buildings and cubical contents, as being, in their opinion, matters of urgency, leaving over until a later date other questions connected with the Building Acts.

The Committee held thirteen meetings and participated in six conferences with public authorities so as to ensure a thorough exploration of the subject.

The extensive character of their investigations involved their proceedings extending over eighteen months.

Under pressure from the late President, the present President, and the Council itself, the Committee did their best to expedite their work, and decided to issue an interim report on higher buildings and cubical contents before submitting a general report upon the whole reference.

This interim report having been delivered to the Council, the Council adopted the course of referring the Building Acts Committee's report to the Art Standing Committee, the Practice Standing Committee, the Science Standing Committee, and the Housing and Town Planning Committee.

Upon receipt of these reports the Council decided to adopt the report of the Art Standing Committee, thus setting aside all the recommendations of the Building Acts Committee, except that portion dealing with the present limit of 60 feet, which they considered might be increased to 80 feet.

Immediately upon coming to their decision the Council communicated its substance to the entire Press of the Kingdom without first advising the Building Acts Committee of their decision, the official intimation of their decision reaching the Building Acts Committee some five days after the Press had been supplied with the information.

The Council likewise communicated their decision directly to the six public bodies with whom the Building Acts Committee had conferred, instead of inviting the Building Acts Committee to so communicate with the bodies in question.

The communication sent by the Council to the Press and to the public bodies omitted all reference to the fact that the Art Standing Committee had expressed themselves in favour of higher buildings being permitted in occasional positions, while the communication itself was in substance the minority report which had been prepared and signed by one member of the Building Acts Committee only.

The Council subsequently decided to call a general meeting to consider the question of higher buildings, but failed to inform the Building Acts Committee of their intention so to do.

The Council have now informed the Building Acts Committee that, in view of their having adopted the report of the Art Standing Committee, the London Building Acts Committee be thanked for its services in the past and be formally discharged.

At a private meeting of those members of the Building Acts Committee who had adopted the interim report, it was decided to set out the above facts, and to request you to draw the attention of the Council to same, and to express the following as the opinions of the undersigned:—

(1) That the general treatment by the Council of this

Committee has not been distinguished by that consideration to which it was entitled.

(2) That the discharge of the Committee before it had accomplished the task of dealing with its whole reference with regard to the London Building Acts is placing a slight upon that Committee, and indicates a failure to recognise the value of the conscientious work it has so far performed.

(3) That if the Council treat members of committees specially appointed by them to fulfil a definite task with such scant consideration, they will in the future probably find it difficult to induce members to give their time and experience to the services of the Institute and of the profession.

The undersigned will be obliged if you will make arrangements for printing this letter in the JOURNAL, together with a copy of the resolution of the Building Act Committee of 12 January last, included in paragraph 2 of the letter addressed to you on 13 January last, dealing with the question of alleged premature publicity.—Yours faithfully,

HENRY TANNER.	CHAS. A. DAUBNEY.
J. J. JOASS.	DIGBY L. SOLOMON.
SYDNEY PERKS.	DELISSA JOSEPH.

The following is the Resolution of the London Building Act Committee, dated 13 January 1922, referred to above :

The Building Acts Committee note with surprise the following extracts from the Report of the Art Standing Committee : " The premature publicity which has been given to this Interim Report and the conclusions reached therein by the representatives of the Building Acts Committee is much to be deprecated." " It is much to be hoped that the Council will take steps to prevent in the future such public action by members of Committees appointed to investigate subjects of such controversial nature as this before their Reports have either been considered by the Council or by the members of the R.I.B.A."

The Building Acts Committee unanimously repudiate the statements, which are not founded upon fact, as the only occasion upon which any official communication was made by the Building Acts Committee to the Press, as on the 22 July 1921, when the Joint Hon. Secretary, at the request of the President, addressed the following letter to the newspapers :—

" In order to avoid any misunderstanding, I shall feel obliged if you will allow me to point out that the scheme for ' Higher Buildings for London,' which has been prepared by the Building Acts Committee of the Royal Institute of British Architects, has not yet been submitted to the Council of the Institute, and that therefore the Council have not yet had an opportunity of forming an opinion thereon."

THE CONJOINT BOARD OF SCIENTIFIC SOCIETIES.

The Council of the Institute have voted a contribution of £20 to the funds of the Conjoint Board of Scientific Societies.

The Annual Elections

NEW NOMINATIONS TO COUNCIL AND STANDING COMMITTEES—

The following nominations have been made by members in accordance with By-law 32 :—

AS VICE-PRESIDENTS.

- CROSS : ALFRED WILLIAM STEPHENS, M.A. Cantab. [F.], nominated by Herbert Shepherd, W. Gillbee Scott, Percival M. Fraser, Wm. Woodward, *Fellows* ; Digby L. Solomon, H. G. Fisher, James Ewing, *Associates*.
- DOWNING : HENRY PHILIP BURKE, F.S.A., F.S.I. [F.], nominated by Sir Banister Fletcher, E. Stanley Hull, Septimus Warwick, W. Gillbee Scott, *Fellows* ; John Rawlinson, J. Alan Slater, A. W. Sheppard, *Associates*.
- HEATHCOTE : CHARLES HENRY [F.], nominated by Sydney Perks, Paul Ogden, Fredk. R. Hiorns, A. W. S. Cross, George Hubbard, *Fellows* ; H. G. Fisher, J. L. Harvey, W. E. Brooks, *Associates*.
- HUBBARD : GEORGE, F.S.A. [F.], nominated by Herbert Shepherd, W. Gillbee Scott, Percival M. Fraser, Wm. Woodward, *Fellows* ; Digby L. Solomon, H. G. Fisher, James Ewing, *Associates*.
- SEARLES-WOOD : HERBERT DUNCAN [F.], nominated by Sydney Perks, Delissa Joseph, Lewis Solomon, Heaton Comyn, *Fellows* ; Digby L. Solomon, A. A. Carder, G. A. Bryan, *Associates*.

AS MEMBERS OF COUNCIL.

- CLARKE : MAX [F.], nominated by H. D. Searles-Wood, Lewis Solomon, Sydney Perks, W. Gillbee Scott, Wm. Woodward, *Fellows* ; Digby L. Solomon, Frank Woodward, *Associates*.
- COLLARD : ALLAN OVENDEN [F.], nominated by Sydney Perks, Alfred W. S. Cross, H. D. Searles-Wood, W. E. Riley, Alan E. Munby, W. R. Davidge, *Fellows* ; Digby L. Solomon, *Associate*.
- COMYN : HEATON [F.], nominated by Fredk. R. Hiorns, Basil Oliver, Henry J. Chetwood, T. F. W. Grant, *Fellows* ; Ernest Bates, Kenneth S. Broad, James Ewing, *Associates*.
- DAVIDGE : WILLIAM ROBERT, F.S.I., Assoc.M.Inst.C.E. [F.], nominated by S. D. Adshhead, A. E. Richardson, C. Lovett Gill, Stanley C. Ramsey, *Fellows* ; Geo. A. Langdell, R. B. Walker, W. Harding Thompson, *Associates*.
- FRASER : PERCIVAL MAURICE [F.], nominated by H. D. Searles-Wood, Sydney Perks, W. Gillbee Scott, Max Clarke, Harold Goslett, Wm. Woodward, *Fellows* ; Frank Woodward, *Associate*.
- GILL : CHARLES LOVETT [F.], nominated by Sydney Perks, Delissa Joseph, A. E. Richardson, A. H. Kersey, S. D. Adshhead, Stanley C. Ramsey, Albert W. Moore, F. T. W. Goldsmith, H. D. Searles-Wood, *Fellows*.
- GLANFIELD : ERNEST BUDGE [F.], nominated by Fredk. R. Hiorns, T. F. W. Grant, W. W. Scott-Moncrieff, Heaton Comyn, *Fellows* ; J. William Hepburn, J. L. Harvey, Arthur Welford, *Associates*.
- GOLDSMITH : FRANCIS THOMAS WILBERFORCE [F.], nominated by Sydney Perks, Alfred W. S. Cross, George Hubbard, Albert W. Moore, Edwin Cooper, H. D. Searles-Wood, *Fellows* ; H. G. Fisher, *Associate*.
- HUNT : WILLIAM GEORGE [F.], nominated by H. D. Searles-Wood, Sir Henry Tanner, J. Osborne Smith, Sydney Perks, W. Gillbee Scott, Max Clarke, Wm. Woodward, *Fellows*.
- JOSEPH : DELISSA [F.], nominated by Sydney Perks, Alfred W. S. Cross, George Hubbard, Albert W. Moore, F. T. W. Goldsmith, H. D. Searles-Wood, *Fellows* ; H. G. Fisher, *Associate*.

JOURNAL OF THE ROYAL INSTITUTE OF BRITISH ARCHITECTS

KENNARD : JOHN HAROLD [F.], nominated by W. W. Scott-Moncrieff, Alfred Roberts, Arthur H. Newman, Basil C. Deacon, *Fellows*; W. S. Grice, J. M. Kennard, Arthur Welford, *Associates*.

MOORE : ALBERT WALTER [F.], nominated by H. D. Searles-Wood, Sydney Perks, W. Gillbee Scott, Max Clarke, Harold Goslett, Wm. Woodward, *Fellows*; Frank Woodward, *Associate*.

NICHOLAS : CHARLES [F.], nominated by Arthur Keen, E. Keynes Purchase, C. W. English, Henry J. Cherwood, R. H. Kerr, Owen C. Little, A. Blomfield Jackson, *Fellows*.

REES : THOMAS TALIESIN [F.], nominated by Herbert T. Buckland, C. B. Flockton, Gilbert W. Fraser, J. Alfred Gotch, A. W. Hennings, T. R. Milburn, Francis Jones, *Fellows*.

SCOTT : WILLIAM GILLBEE [F.], nominated by H. D. Searles-Wood, Lewis Solomon, Sydney Perks, Fredk. R. Hiorns, *Fellows*; Digby L. Solomon, A. A. Carder, G. A. Bryan, *Associates*.

SCOTT-MONCRIEFF : WILLIAM WALTER, M.C. [F.], nominated by Owen C. Little, T. F. W. Grant, Basil Oliver, Fredk. R. Hiorns, *Fellows*; Kenneth S. Broad, Harold I. Merriman, Ernest Bates, *Associates*.

SHEPHERD : HERBERT [F.], nominated by H. D. Searles-Wood, W. Gillbee Scott, Max Clarke, Harold Goslett, Wm. Woodward, *Fellows*; Frank Woodward, Leonard A. Culliford, *Associates*.

SWAN : JAMES ALFRED [F.], nominated by Owen C. Little, Basil Oliver, T. F. W. Grant, Fredk. R. Hiorns, *Fellows*; C. B. Gordon, Kenneth S. Broad, Arthur Welford, *Associates*.

AS ASSOCIATE MEMBERS OF COUNCIL

ABERCROMBIE : PROFESSOR LESLIE PATRICK, M.A., Liverpool [A.]. Nominated by Henry V. Ashley, Henry M. Fletcher, Theodore Fyfe, H. Austen Hall, E. Stanley Hall, G. Gilbert Scott, Edward Maufe, *Fellows*.

ASHFORD : WILLIAM HENRY [A.]. Nominated by Sydney Perks, Delissa Joseph, Albert W. Moore, F. T. W. Goldsmith, H. D. Searles-Wood, W. Gillbee Scott, Max Clarke, *Fellows*.

CART DE LAPONTAINE : LIEUT.-COLONEL HENRY PHILIP L., O.B.E., T.D. [A.]. Nominated by E. Guy Dawber, H. D. Searles-Wood, S. D. Adshead, Arthur Keen, Walter Cave, H. Austen Hall, Sir Reginald Blomfield, *Fellows*.

CULLIFORD : LEONARD ARTHUR, F.S.I. [A.]. Nominated by Wm. Woodward, Herbert Shepherd, W. Gillbee Scott, Percival M. Fraser, *Fellows*; F. R. Jelley, W. E. Masters, Frank T. Dear, *Associates*.

LAWRENCE : GEORGE CHURCHUS, R.W.A. [A.]. Nominated by Wm. B. Whitie, Herbert T. Buckland, A. W. Hennings, Thomas R. Milburn, Alan E. Munby, E. Stanley Hall, Stanley Hamp, *Fellows*.

WELFORD : ARTHUR [A.]. Nominated by Fredk. R. Hiorns, E. J. May, T. F. W. Grant, Basil Oliver, *Fellows*; Harold I. Merriman, Ernest Bates, Kenneth S. Broad, *Associates*.

WOODWARD : FRANK [A.]. Nominated by Alfred W. S. Cross, Sydney Perks, George Hubbard, Fredk. R. Hiorns, *Fellows*; H. G. Fisher, W. E. Brooks, J. L. Harvey, *Associates*.

AS MEMBERS OF THE PRACTICE COMMITTEE

NICHOLAS : CHARLES [F.]. Nominated by Sir Aston Webb, Arthur Keen, R. H. Kerr, C. W. English, Owen C. Little, Henry J. Chetwood, A. Blomfield Jackson, *Fellows*.

NIVEN : DAVID BARCLAY [F.]. Nominated by W. E. Vernon Crompton, Herbert Wigglesworth, C. Lovett Gill, A. E. Richardson, S. D. Adshead, Stanley C. Ramsey, *Fellows*; R. B. Walker, *Associate*.

AS MEMBERS OF THE SCIENCE COMMITTEE

DIXON-SPAIN : JOHN EDWARD, O.B.E. [F.]. Nominated by Sir Aston Webb, Arthur Keen, A. Blomfield Jackson, C. W. English, R. H. Kerr, Henry J. Chetwood, Owen C. Little, *Fellows*.

JAGGARD : WALTER ROBERT [F.]. Nominated by H. D. Searles-Wood, Henry V. Ashley, Walter Cave, Arthur Keen, Maurice E. Webb, *Fellows*; Allan Graham, Clarence S. Picton, *Associates*.

AS ASSOCIATE MEMBER OF SCIENCE COMMITTEE

SAYER : HARVEY ROBERT, F.S.I., A.M.Inst.C.E. [A.]. Nominated by Edwin J. Sadgrove, E. C. P. Monson, Percy B. Tubbs, Major Harry Barnes, *Fellows*; L. Sylvester Sullivan, Graham B. Tubbs, E. Alexander Young, *Associates*.

ATTENDANCES AT COUNCIL AND STANDING COMMITTEE MEETINGS, 1921-22

COUNCIL (16 meetings).

Paul Waterhouse, *President*, 15; *E. Guy Dawber, *Vice-President*, 11; Professor S. D. Adshead, *Vice-President*, 12; A. W. S. Cross, *Vice-President*, 1; H. D. Searles-Wood, *Vice-President*, 15; Sir Reginald Blomfield, R.A., *Past President*, 0; John W. Simpson, *Past President*, 0; Arthur Keen, *Hon. Secretary*, 15; H. V. Ashley, 16; Major Harry Barnes, M.P., 6; Walter Cave, 13; Sir Banister F. Fletcher, 10; *W. Curtis Green, 11; H. Austen Hall, 13; E. Stanley Hall, 16; E. Vincent Harris, 9; †H. V. Lanchester, 5; T. Geoffrey Lucas, 13; †Sir Edwin Lutyens, R.A., 1; Alan E. Munby, 13; C. Stanley Peach, 3; Sydney Perks, 15; W. E. Riley, 14; G. Gilbert Scott, R.A., 1; Maurice E. Webb, 14; *Members of Council*.

Associate Members of Council.—H. Chalton Bradshaw, 14; Stanley H. Hamp, 11; J. Stockdale Harrison, 6; J. Alan Slater, 15; Michael Waterhouse, 11; J. Hubert Worthington, 8.

Representatives of Allied Societies.—H. T. Buckland (Birmingham), 15; C. B. Flockton (Sheffield), 7; Gilbert W. Fraser (Liverpool), 4; J. Alfred Gotch (Northants), 8; A. W. Hennings (Manchester), 8; Llewellyn Kitchen (York), 0; T. R. Milburn (Sunderland), 7; W. B. White (Glasgow), 3.

Representative of the Architectural Association.—W. G. Newton, 8.

STANDING COMMITTEES.

Art (10 Meetings).—*Fellows*: Professor S. D. Adshead, 6; Herbert Baker, 4; Walter Cave, 5; J. J. Joass, 2; Sir Edwin L. Lutyens, R.A., 0; Halsey Ricardo, 7; Professor A. E. Richardson, 1; Professor F. M. Simpson, 4; Maurice E. Webb, 9. *Associates*: W. R. Davidge, 5; Cyril A. Farey, 4; P. W. Lovell, 6; Michael Waterhouse, 2; W. A. Webb, 3; Arthur Welford, 8. *Appointed by Council*: Walter Tapper, 8; W. A. Forsyth, 6; Alfred Cox, 5; F. R. Hiorns, 6; J. D. Coleridge, 6.

Literature (8 Meetings).—*Fellows*: Louis Ambler, 6; Martin S. Briggs, 5; Hubert C. Corlette, 6; W. Curtis Green, 0; E. Stanley Hall, 3; Arthur Stratton, 4; C. Harrison Townsend, 6; W. Henry Ward, 6; P. Leslie Waterhouse, 3; H. H. Statham, 1. *Associates*: W. H. Ansell, 5; L. B. Budden, 0; H. Chalton Bradshaw, 5; A. T. Edwards, 4; J. Alan Slater, 7; J. Hubert Worthington, 1. *Appointed by Council*: H. Austen Hall, 5; H. M. Fletcher, 6; A. H. Moberly, 6; S. C. Ramsey, 6; C. E. Sayer, 7.

Practice (9 Meetings).—*Fellows*: Henry V. Ashley, 9; Max Clarke, 5; A. W. S. Cross, 0; G. Topham Forrest, 2; Arthur Keen, 3; G. H. Lovegrove, 8; C. Stanley Peach, 3; Sydney Perks, 6; John Slater, 9; W. Henry White, 7. *Associates*: G. Scott Cockrill, 9; Horace Cubitt, 0; H. V. Milnes Emerson, 6; J. Douglas Scott, 8; Digby L. Solomon, 6; Herbert A. Welch, 7. *Appointed by Council*: Harry Teather, 5; Rupert Savage, 2; Francis Jones, 8; T. R. Milburn, 5; A. O. Collard, 8.

Science (9 Meetings).—*Fellows*: H. Percy Adams, 1; R. Stephen Ayling, 2; Felix Clay, 2; W. E. Vernon Crompton,

* Absent from several meetings through illness.

† Absent in India during most of the Session.

ton, 8; Francis Hooper, 8; Alan E. Munby, 5; S. B. Russell, 6; H. D. Searles-Wood, 4; Professor R. Elsey Smith, 4; Raymond Unwin, 2. *Associates*: R. J. Angel, 2; Henry W. Burrows, 9; C. A. Daubney, 8; G. Leonard Elkington, 4; J. H. Markham, 3; Chas. Woodward, 6. *Appointed by Council*: J. Ernest Franck, 8; T. F. H. White, 0; H. A. Saul, 6; Herbert Shephard, 4; E. Fiander Etchells, 4.

Examinations

The Examinations of the Royal Institute of British Architects will be held on the following dates:—

The Intermediate on 9, 12, 13 and 15 June 1922. Applications must be sent in on or before 6 May.

The Final and Special Examinations on 22, 23, 24, 26, 27 and 29 June 1922. Applications must be sent in on or before 20 May.

The Special War Examination on 3, 4, 5, 6 and 7 July 1922. Applications must be sent in on or before 2 June.

The Testimonies of Study, etc., with the necessary fees, must accompany all applications, all of which are to be addressed to the undersigned.

IAN MACALISTER, *Sec. R.I.B.A.*

Competitions

NEWPORT WAR MEMORIAL COMPETITION.

The Competitions Committee of the Royal Institute of British Architects have been in negotiation with the promoters of this Competition and the Conditions, which will be issued immediately, are now in order. The veto of the Royal Institute of British Architects is accordingly removed, and members are at liberty to take part in the Competition.

IAN MACALISTER, *Sec. R.I.B.A.*

COMPETITIONS OPEN.

Auckland War Memorial.
Ipswich War Memorial.

The conditions and other documents relating to the above competitions may be consulted in the Library.

Members' Column

MR. B. M. GOODWIN, A.R.I.B.A., has resumed practice at 39, Grosvenor Place, S.W.1.

ROOM WANTED.

ONE unfurnished room wanted by architect as office in London. Rent £20 per annum.—Apply Box 2842, c/o Secretary R.I.B.A., 9 Conduit Street, London, W.1.

OFFICE TO LET.

OFFICE to Let, Victoria Street, Westminster. Furnished, Electric light and fittings. £40 per annum.—Apply Box 245, c/o Secretary R.I.B.A., 9 Conduit Street, W.1.

APPOINTMENTS WANTED.

LICENTIATE R.I.B.A. urgently needs architectural work of any description. Over 20 years' London experience, thoroughly reliable and used to responsibility.—Apply Box 549, c/o Secretary R.I.B.A., 9 Conduit Street, W.1.

A.R.I.B.A. (28) desires position as Assistant. Working drawings, details, specifications, surveys and perspectives. Experience in domestic, hospital, church and commercial work. Excellent testimonials. Moderate salary to commence.—Apply Box 2921, c/o Secretary R.I.B.A., 9 Conduit Street, W.1.

Minutes XV

At the Annual General Meeting (being the Twelfth General Meeting of the Session 1921-1922) held on Monday, 1 May 1922, at 8 p.m.—Mr. H. D. Searles-Wood, Vice-President, in the chair. The attendance book was signed by 29 Fellows (including 8 members of the Council), 23 Associated (including 4 members of the Council), and 2 Licentiates.

The Minutes of the Ordinary General Meeting held on 3 April, having been published in the JOURNAL, were confirmed and signed.

The Hon. Secretary announced the decease of the following members:—Professor James Black Fulton, elected Associate 1906 and Fellow 1921. Mr. T. A. Millar, elected Fellow 1921, Mr. G. E. Halliday, F.S.A., elected Fellow 1897, Mr. Harold French, elected Associate 1909, and Mr. Edgar Stones, elected Licentiate 1911. It was RESOLVED that the regrets of the Institute for the loss of these Members be recorded on the Minutes of the Meeting, and that a message of condolence and sympathy be conveyed to their relatives.

The Hon. Secretary read a letter from Mr. G. Gilbert Scott [F.], R.A., thanking the members for their congratulations on his election as a Royal Academician.

The following members attending for the first time since their election were formally admitted by the Chairman:—Messrs. T. P. Bennett, Fellow, and E. H. Allsford and G. T. Heard, Associates.

The Chairman formally presented the Report of the Council for the official year 1921-22, and informed the members that the Chairmen or other representatives of each of the Committees whose reports were appended to the Council's Report had been asked to attend the meeting so as to be in a position to answer any questions that might be asked in connection with these reports.

The Chairman having moved the adoption of the Report and invited discussion upon it, the Hon. Secretary seconded the motion, and a discussion ensued, in which the following members took part:—Messrs. Wm. Woodward [F.], Percival M. Fraser [F.], M. S. Briggs [F.], F. R. Hiorns [F.], Francis Hooper [F.], Professor S. D. Adshead [F.], T. R. Milburn [F.], Alan E. Munby [F.].

The following members then replied to questions on behalf of the Committees which they represented:—Mr. Walter Cave [F.], for the Art Standing Committee and the Board of Architectural Education; Mr. John Slater [F.], for the Practice Standing Committee; Mr. H. W. Burrows [A.], for the Science Standing Committee; Mr. J. Alan Slater [A.], for the Literature Standing Committee; Mr. H. V. Ashley [F.], for the Competitions Committee; Mr. W. R. Davidge [F.], for the Town Planning and Housing Committee; Mr. Sydney Perks [F.], for the Finance and House Committee.

The motion having been put from the Chair, it was RESOLVED unanimously, that the Report of the Council for the official year 1921-22 be approved and adopted.

The Chairman stated that the list of attendances at the Council and Standing Committee meetings had been laid on the table and would be printed in the next issue of the JOURNAL.

Upon the motion of the Chairman, seconded by the Hon. Secretary, a vote of thanks was passed by acclamation to Mr. John Hudson [F.] and Mr. A. W. Sheppard [A.], for their services as Hon. Auditors for the past year, and these gentlemen were again nominated as Auditors for the ensuing year of office.

The proceedings closed at 9.50 p.m.

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FIG. 2.—MALTON'S VIEW OF ST. JAMES'S STREET IN 1800, SHOWING BROOKS'S (RIGHT) AND BOODLE'S (LEFT)

London Clubs

By STANLEY C. RAMSEY [F.]

[Read before the Royal Institute of British Architects, Monday, 3 April 1922]

THE Clubs of London, considered as a group of buildings, are amongst our most cherished possessions. We speak of them collectively, as we speak of the "City Churches" or the "London Squares," as something peculiar to and inseparable from London life.

Mr. Ralph Nevill, to whom I am indebted for much of my information on this subject, in his book on London Clubs, tells us that "the modern club, with its luxuries and comforts, has its origin in the tavern and coffee-house of a long-past age." He mentions the "Mermaid," which is supposed to have been the meeting-place of Shakespeare and Ben Jonson, as one of the earliest of London's clubs. But it was the coffee and chocolate houses of the seventeenth and eighteenth centuries which formed the nucleus of so many of our famous clubs. The

proprietors found that as time went on it paid them to exclude the general public and to run these houses for the benefit of their regular *habitués*, who themselves decided by election who were and who were not to be allowed to join them. Afterwards committees took the management of the clubs out of the hands of the proprietors and ran them for the benefit of the members. Thus we find the name of the original proprietor or the name of the coffee-house is to-day the name of the club, such as Arthur's, White's, Brooks's and Boodle's.

These earlier social clubs are to be found in St. James's Street, a street conveniently adjacent to St. James's Palace, and famous in the annals of the eighteenth century. Pall Mall is the chosen neighbourhood of the literary, political and Service clubs of the early and middle nineteenth century; whilst

the later social clubs are to be found for the most part in Piccadilly. There are, of course, other clubs dotted all over London, but this is Clubland proper.

Many of the club buildings have undergone strange and, in some cases, sad experiences, whilst, happily, many others remain practically as they were built. The buildings themselves are not all of equal architectural importance, some very famous clubs being represented by very unworthy architecture, and others, though perhaps having an interesting façade, have been spoilt internally by thoughtless renovations and alterations. Again, the interiors may have survived practically unchanged, whilst it is the exteriors that have suffered by subsequent so-called "improvements." For my purpose this evening I have, therefore, had to make a selection; and if I pass over anything that merits notice, I must crave your pardon.

BROOKS'S.

Brooks's Club, on the west side of St. James's Street (Fig. 1), is one of those famous centres around which the brilliant social life of the latter half of the eighteenth century revolved. There is a distinct Georgian atmosphere about the place and the street which, in spite of the changes of the last 150 years, persists to this day—a flavour, as it were, of that attractive and cultured life which we associate with the period of its foundation; and thus it is no difficult work for the imagination to people the district with the well-known figures of Fox, Pitt, Burke, Sir Joshua Reynolds, Hume the philosopher, Gibbon the historian, with Garrick and Sheridan—all of whom were members of Brooks's.

The club was founded in 1764, and its original headquarters would appear to have been somewhere in the neighbourhood of the Marlborough Club in Pall Mall. The original founder was Almack, of happy memory, under whose direction the club seems to have acquired a reputation for heavy gambling and gay living. There are in the present smoking-room (originally the gambling-room) two of the old gaming tables, while on the walls of the staircase is a frame of counters, red, black and white, the faces of which are marked with various sums ranging from a few pounds up to a thousand guineas—pleasantly suggestive of long nights and heavy settlements. In 1774 Brooks became the master of the establishment, and in 1778 he built the present premises, which henceforth bore his name.

There seems to be some doubt as to who was the

architect of the building. The land was conveyed to Mr. Brooks from Henry Holland, who has been credited with the design, though competent critics have ascribed the work to James Wyatt. Henry Holland was a well-known architect of speculative tendencies, who acquired land in the south-western district and developed estates in Sloane Street and the neighbourhood. He was, moreover, architect for the Prince Regent, and built Carlton House for his august master. There is a solidity about the early part of the club building, together with a handling of the detail, which is somewhat after the manner of some of the old houses in Hans Crescent and Chelsea, which, if Holland were the architect for these, would go far to establish him as the designer of Brooks's. The elevations have suffered from subsequent alterations, and the original character has been somewhat lost. Malton's view of St. James's Street (Fig. 2), published in 1800, shows the façade in its original condition. There was then a projecting porch of four panelled piers, with a graceful iron balcony over, and the windows to the first-floor rooms had plain brick surrounds with gauged arches in place of the not too well designed pedimented tops and architraves of cement which now disfigure them. The old sash windows with the small panes have also been removed; the substitution of plate-glass gives the building a mid-Victorian appearance; and matters were not improved by the addition of the balustrade to the roof.

The interior has had a much happier fate, so that much of its original charm remains. The large smoking-room on the first floor (the "Great Subscription Room"), as may be judged from the plate (Fig. 3), is a magnificent apartment. It has a splendid barrelled ceiling, and the ornament throughout is beautifully detailed and executed. The ceiling is divided into rectangular-shaped panels by flat bands of delicately modelled guilloché ornaments, accentuated by the gilding, which is put on solid—the correct method of gilding for this class of work. From the centre of the ceiling hangs a graceful fitting of gilt-metal and glass lustres, originally used for candles but now adapted for electric light. The period of gas, with the accompanying mid-Victorian fittings of unhallowed association, was passed over in disdainful neglect, and before the introduction of the present method of illumination nothing later than candles or lamps was used; and the club is to be congratulated on its escape from the artistic horrors of the gasolier. Passing on to the

adjoining room—the strangers' smoking-room, formerly the dining-room of more stately days—we find ourselves in another beautiful chamber of a similar style and decoration.

Brooks's is expressive of the older kind of club, and is one of a famous group such as Arthur's, White's and Boodle's, a more purely social institution as compared with the great political clubs like the Reform, the Carlton and the Conservative, which did not come into being until the early part of the nineteenth century—one of the direct results of the broadening and consolidation of the two great national parties on the more democratic basis caused by the economical developments of this time.

WHITE'S.

One of the most famous of the eighteenth-century clubs in St. James's Street is White's ; but although important socially and historically, it has little architectural interest.

The original house consisted of a plain three-storey brick building with a Doric portico and a light iron railing over. In 1811 this doorway was removed, and the celebrated bow-window from which Beau Brummell and Lord Alvanley, with their followers, quizzed the passers-by, was put in its place. The present front is the work of Lockyer, who remodelled the façade in 1850. The four bas-reliefs immediately under the main cornice are by George Scharf, junior. The result, though by no means a brilliant piece of architecture, is interesting as a Victorian essay in the eighteenth-century manner—one seems to see the "Bucks" and the "Beaux" of the earlier period grinning through a mask of Victorian respectability. The finest room in the club is the coffee-room.

Probably the most interesting thing about White's architecturally is that Robert Adam, in 1787, prepared a scheme for what was practically the entire rebuilding of the club. If this had been carried out, White's would have been the finest of the eighteenth-century club buildings ; but, alas ! Adam's scheme remained a paper one. The original drawings may be seen in the Soane Museum ; and I am indebted to the courtesy of the curator, Mr. Arthur Bolton, for permission to show them to-night.

BOODLE'S.

Boodle's Club is on the same side of St. James's Street as White's, and almost opposite Brooks's

(Fig. 2). Of all the eighteenth-century clubs that remain to us, this is the most complete both externally and internally.

In some articles on the London Clubs I wrote for the *Architectural Review* some nine years ago I attributed the design of Boodle's to Robert Adam ; and if I erred, I erred in good company, for Mr. Ralph Nevill and Messrs. Belcher and Macartney also ascribe the work to this architect. But Mr. Arthur Bolton, who has made such an exhaustive study of the Adam Brothers and their works, will have none of it ; he says there is not a shred of direct evidence to connect Adam with the design of this building. In an authoritative article on the club published in *Country Life*, 9 December 1916, Mr. Bolton gives all the evidence against the Adam theory. From this it would appear that the club was built about 1775, and not in 1765, the date commonly assumed. He quotes Horace Walpole, in writing to Horace Mann, on 23 March 1776, referring to Boodle's : "A new club is opened in St. James's Street that prizes itself in surpassing all its predecessors." Again, some sale particulars published in 1802 described the lease to be sold as dated from 5 July 1775. Assuming this date of 1775 to be the correct one, then, there is much to be said against the theory that Robert Adam was the architect. Comparing this building with the Society of Arts, which was built by Adam in 1772-74, we find, particularly in the interior decoration, an inferiority of detail and general design to that of the Adelphi building. What was possible in 1765 seems improbable in 1775.

But if we cannot properly describe Boodle's as the work of the Adam Brothers, we can quite safely say that it belongs to the Adam School. The street elevation is so well known to all students of architecture that a complete analysis is unnecessary. The large three-light window on the first floor, expressive as it is of the fine chamber behind it, is probably one of the best-known windows in London. Its combination with the bow-window of the lower storey is particularly successful, though this bow-window was added at a later date, probably by Papworth. The building remains to-day practically as it appeared when it was first built. The lower storey and dressings are of painted plaster, the main walling being of ordinary London stocks, mellowed by age to a delightful tone.

The interior has been almost as little altered as the exterior. Between 1821 and 1824 certain altera-

tions were made by John Papworth, and probably it was he who added the rather uninteresting coffee-room at the rear. The finest room in the buildings is the large saloon on the first floor. Originally the gambling-room of the club, it is now simply known as the saloon. This chamber, and the two small saucer-domed apartments opening out of it, are arranged *en suite*. The ceiling of the saloon, which was originally painted, has now been covered with plain whitewash, to the undoubted detriment of the room; fine as it is now, it must have been still more impressive before the paintings which adorned the ceiling were removed. The face of the pilasters is treated with a fine arabesque, and the capitals, with their rich cluster of delicately modelled leaves, are good examples of typical "Adam" work. The doors are divided into panels enriched with a small guilloche ornament, which is both effective and original. The door opposite the large Venetian window is a particularly beautiful example, with its well-proportioned entablature and ram's-head pilasters. The panels immediately below the cornice of the saloon are modelled in low relief, and the only remaining expression of the painter whose work originally embellished the apartment is seen in the painted panel over the fireplace.

Boodle's has always been a purely social club. Originally known as the Savoir Vivre, it was in its early days noted for the high play that was indulged in by the members, and the costliness of the masquerades and other festivities which they inaugurated. The club records, including lists of members, curious and instructive old betting-books, and a complete list of managers since its inception, date back to 1764. Gibbon, the historian, was a member of Boodle's, and doubtless he found it a pleasant retreat after his monumental labours on the *Decline and Fall*.

Of the remaining clubs in St. James's Street perhaps Arthur's and the Devonshire are the most interesting. Arthur's was the original abode of White's, but the present clubhouse was built in 1825. The elevation is quiet and restrained, and if not an exciting piece of architecture, it is both scholarly and dignified. The Devonshire Club was once the abode of Crockford's, a celebrated gaming-house of the early nineteenth century. The original building was designed by Wyatt in 1827, but has since been refronted.

ST. JAMES'S.

Of all the clubs in Piccadilly my favourite, architecturally, is the St. James's.

Coventry House, No. 106 Piccadilly, was originally built by Sir Hugh Hunlock, whose initials, H. H., may be seen on a fine old lead cistern, bearing the date 1761, which still exists in the front area; but, unfortunately for Sir Hugh, he appears to have built without counting the cost, and in 1764, when the house was still unfinished, he was compelled by the force of circumstances to sell to the sixth Earl of Coventry, who purchased it for 10,000 guineas, with an annual ground rent of £75. The sixth Earl's chief claim to notoriety seems to have been the fact that he had the temerity to take for his wife the celebrated beauty Maria Gunning, the eldest of the three amazing Irish sisters who, without either manners or education, captured London by their dazzling good looks. The first Countess, however, was dead when the Earl took Coventry House, and it was for the pleasure of her successor that Robert Adam was employed on the finishing and decorating of the interior.

Who was actually responsible for the original design of the building I have been unable to discover. Certain features seem to indicate Sir William Chambers as the author, particularly the treatment of the principal staircase giving access to the upper rooms. This corresponds, both in plan and detail, to a similar staircase which existed in Carrington House, Whitehall—now, alas! pulled down—and for which it is known Chambers was responsible. It must be remembered that the work of the architects of the eighteenth century was much more of one school than is the case to-day; and with the smaller and less important buildings, unless some clear record exists, it is extremely difficult, even after a close examination, to attribute them to any particular artist. Whoever's work it was, the principal front is one of the most dignified and noteworthy façades in Piccadilly, and can more than hold its own when compared with more important and better-known buildings. It is, as the date and the foregoing summarisings would suggest, a building of the late Palladian period, and is a delightful example of restrained artistry. The design may be said to be the last brilliant flicker of the old school, which was shortly to give place to the works of Adam and the later men.

Robert Adam has been referred to in connection with the design of certain parts of the interior. He

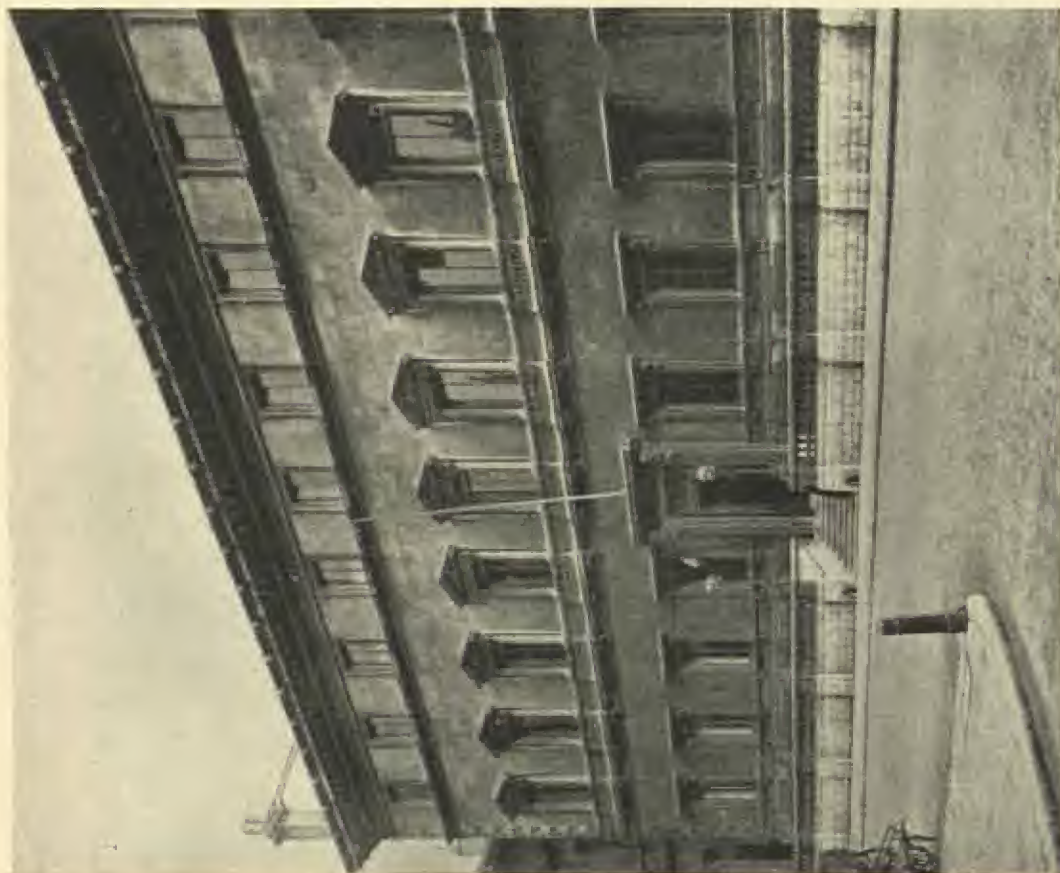


FIG. 6.—THE REFORM CLUB, PALL MALL



FIG. 1.—BROOKS'S CLUB
General View of Exterior

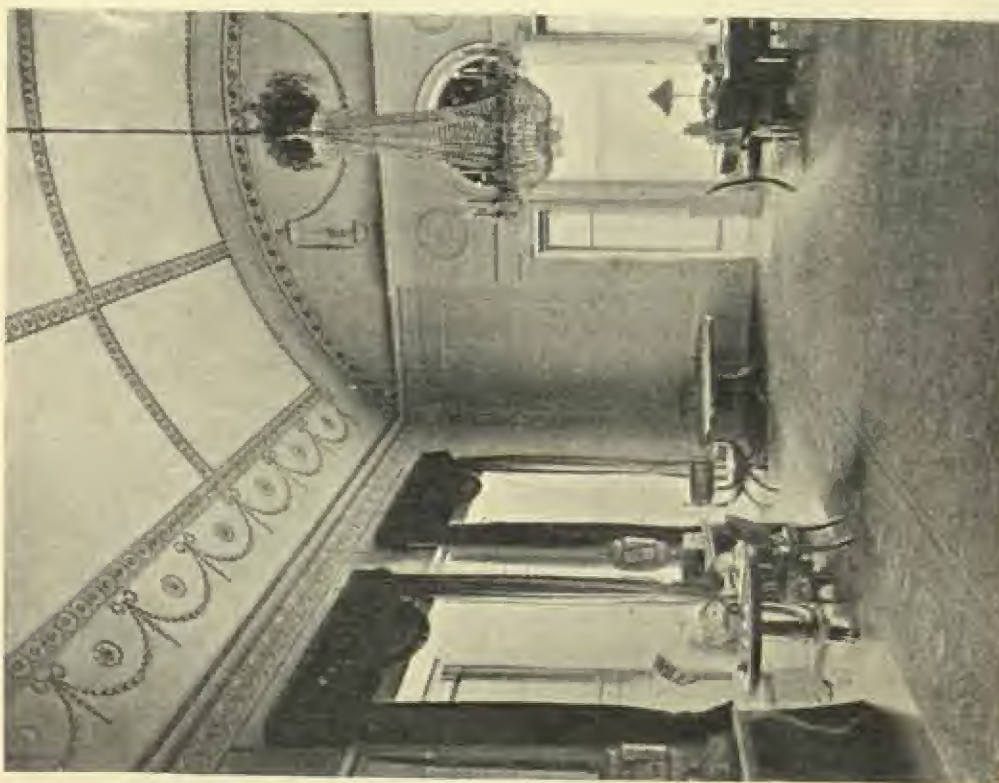


FIG. 3.—BROOKINGS CLUB
Large Smoking Room

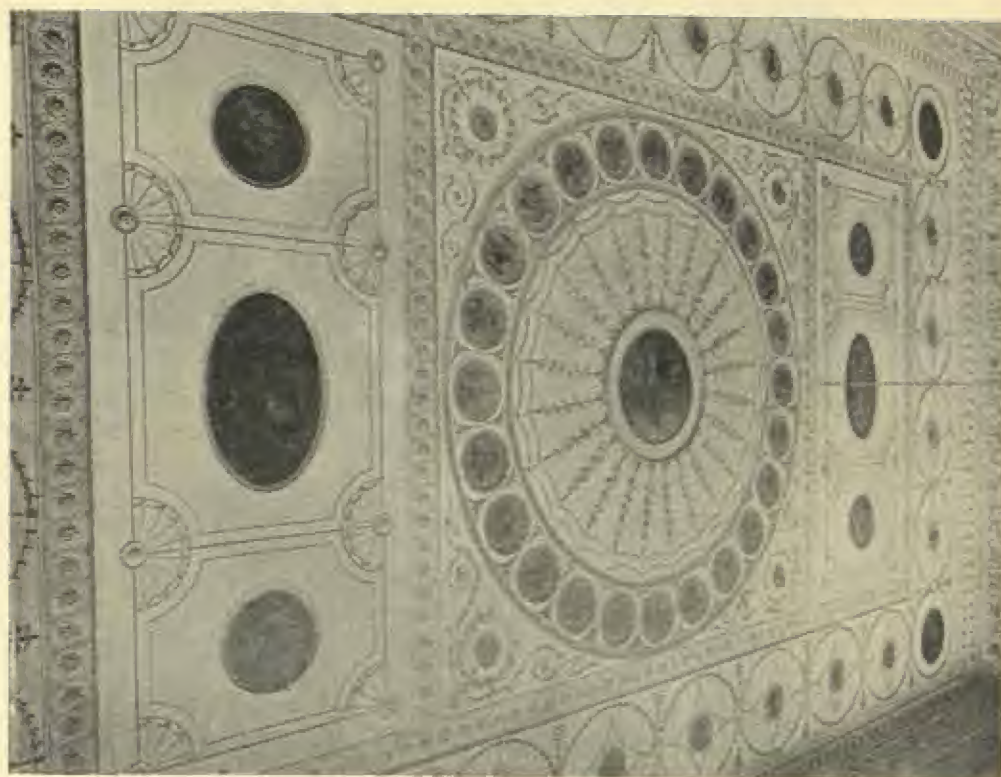


FIG. 4.—THE ST. JAMES'S CLUB
Coffee Room Ceiling

first comes on the scene early in 1765, as dated drawings at the Soane Museum testify. The ceiling of the front room on the first floor (originally the dining-room, now the coffee-room of the club) (Fig. 4) is an interesting example of Adam's earlier manner, which differed considerably from the more pronounced style of his later years. In the original drawing, which may be seen at the Soane, the colouring is quite different from that which is usually associated with the name of its talented originator; it more closely resembles its Roman prototypes, on which Adam worked. The drawing is inscribed as a "Design of a Ceiling for the Dining Room at the Rt. Honble. The Earl of Coventry's House in Piccadilly. In the style of the painted ornaments of the Ancients." The room immediately at the rear of the coffee-room, formerly Lady Coventry's bedroom, and now used as a members' private dining-room, contains another beautiful Adam ceiling. Adjacent is a small octagonal room which was originally Lady Coventry's boudoir. Adam was particularly fond of these small octagonal rooms, and the work here is equal to anything he ever did.

Though built originally as a private house, the building is singularly well adapted for the purpose of a social club such as the St. James's, and it is happy in having escaped spoliation at the hands of the modern decorator, whose misdirected efforts have resulted in the partial or complete ruin of many similar buildings.

No. 105 Piccadilly was built in 1780 for Lord Barrymore, a wild young rake of the late eighteenth century. After many vicissitudes the building became the home of the Isthmian Club. There is practically nothing of the original interior left.

No. 81 Piccadilly was, for a short time, the home of Watier's, a famous club started by George IV when he was Prince Regent, and managed by his chef.

Another of the famous houses in Piccadilly used for a club is the home of the Naval and Military. Built in 1760 for Lord Egremont, it was for a long time the residence of Lord and Lady Palmerston. The interior of the building has suffered terribly. There is practically nothing of any interest left beyond the small octagon room, which was once Lady Palmerston's boudoir and has a very beautiful ceiling.

THE UNION CLUB.

I am now going to take you to another part of London to visit the Union Club—a link between the clubs of St. James's Street and those of Pall Mall.

The present home of the club, forming, with the College of Physicians, a complete block of buildings on the west side of Trafalgar Square, was built from designs by Sir Robert Smirke, R.A., in 1822. The design is in the manner of the so-called Greek Revival, though why it should be called "revival" any more than the work of the Renaissance in Italy should be called Roman Revival, it is difficult to say. But whatever criticism may be made of the term, it will be generally agreed that the leading men of the Greek Revival, to use the accepted phrase, made a considerable contribution to London—so considerable, indeed, that it is impossible to realise what the architectural aspect of the city would have been without them. Pre-eminent among them was the architect of the Union Club, and though individual works of his contemporaries may be finer in certain respects, his work, taken as a whole, is by far the most important that was carried out in London during the early part of the nineteenth century.

Smirke's buildings are remarkable for the simplicity of theme, the skilful disposition of his masses in elevation, and the subordination and scholarly treatment of his detail. His chief weakness was his inability to grasp the broader significance of his plan. An instance of this is found in his design for the British Museum, in which the central pavilion, forming the most important feature in the main front, is merely the approach to a rather narrow entrance hall, which, in the original plan, gave access on to an open courtyard; the subsequent filling in of this courtyard or quadrangle with the reading room provided more reason for the emphasis of the entrance, but this was more in the nature of a happy accident than anything else. A somewhat similar error in first principles is evidenced in the block of buildings of which the Union Club forms part. The block, forming, as it does, the side of a square open on three sides, should have been considered in relation to the design of the whole area, and the placing of the hexastyle portico which forms the entrance to the College of Physicians facing towards, instead of away from, the National Gallery was, I think, a mistake. The elevation of the Union Club towards Trafalgar

Square is, considered by itself, a well-balanced and appropriate façade for its position. It is when we come to consider the direction which is given to it by ending the plan on the north side by the portico already referred to, and treating the foot of the plan in Cockspur Street with the bow-window to the morning room of the club—a charming feature in itself—that we realise this error in principle.

The design of the interior of the building is in some respects not equal to that of the exterior, particularly in the treatment of some of the detail. The entrance hall is quite plain, and has very little architectural interest. Beyond, and opening out of it, is the main staircase, with a simple balustrade of cast iron crowned with a mahogany handrail, the sweeping lines of which are extremely graceful. The architects of this period have taught us, beyond all others, the correct use of cast iron, and as an example of what can be done in this material one has only to instance the fine lamp standards on this staircase. The coffee-room occupies the central position on the ground floor facing towards Trafalgar Square, which affords a pleasant outlook for the four windows of this apartment. It has a well-detailed ceiling, with enrichments of delicate mouldings, and slightly raised Greek frets. Most attractive features of the room are the four cut-glass chandeliers, now adapted for the purposes of electric light, which beautiful fittings in themselves give altogether a wonderful appearance of gaiety and glitter to the apartment. The morning room, with its spacious bow-window overlooking Cockspur Street, is the glory of the club. It has probably the brightest and gayest outlook of any club window in London: from it one seems to be looking at the very heart of the metropolis where east meets west. The room is divided into three bays with scagliola columns, based on the order from the Tower of the Winds at Athens, though not nearly so well executed as the similar columns in the hall of the Athenæum Club. There are two chimney-pieces, one in each of the end bays. The design of these, however, is not very good; it would seem that Smirke had intended to be a little playful in their design, but the result is not far removed from the grotesque.

Sir Robert Smirke and his brother Sydney were also responsible for the Oxford and Cambridge Club in Pall Mall, which was built in 1836-37. It is interesting to note how many of these Pall Mall clubs were built within a few years of one another.

Nash seems to have started with the United Service Club in 1828; the Athenæum, by Decimus Burton, followed in 1830; then the 'Travellers', by Barry, in 1832; the Reform in 1837-38; and the Carlton in 1854. Comparing these Pall Mall Clubs with the clubs of St. James's Street, we are at once struck with the more serious aspect of these later buildings. The Georgian tradition was dead, and the nineteenth century was in full swing.

The Oxford and Cambridge Club has an imposing front towards Pall Mall, but the architecture lacks the purity of the earlier Union Club—architecturally it stands midway between this building and the Conservative Club, which was built by Sydney Smirke and Basevi in 1845. One of the most interesting features in the façade are the seven bas-reliefs executed by Nicholl, who was also employed on similar work at the Fitzwilliam Museum at Cambridge. Internally the club is chiefly remarkable for its library.

THE UNITED SERVICE CLUB.

It would materially add to the already heavy burden of the average architect could he foresee the changes that would be effected in his buildings at the hands of others in future years. Sometimes the building is fortunate in being dealt with by a considerate and sympathetic designer, but in other cases the design only too surely suffers by later additions and alterations.

This, to a certain extent, is the case with the United Service Club. Built by Nash in 1828, it remained to be altered and embellished by Decimus Burton in 1858, a proceeding which, judging from drawings that exist of the original fabric, must have robbed it of much of its essential charm. The members of that year, discontented with the somewhat severe and chaste lines of the exterior, called in Burton "to ornament and improve it," to use a felicitous phrase. Burton consequently proceeded to do so with great gusto, though we cannot feel that his labours were altogether happily directed. Fortunately, Decimus Burton's efforts at the United Service Club were chiefly confined to the exterior; the interior retains more of the true spirit of Nash.

The club was originally housed in a building in Charles Street, off the Haymarket, an interesting example of the Greek manner of the early part of the nineteenth century, now demolished. The present premises in Pall Mall were commenced in 1828 and completed by midsummer 1829.

From a perspective of the original building, this appears to have been a sober and dignified composition. There was originally a portico on the Waterloo Place side, the removal of which was effected by Burton, who apparently placed it in the rear; but, apart from this, Burton concerned himself mainly with the application of somewhat meretricious and unnecessary ornament.

A careful comparison of the two designs, as it was and as it is, indicates that Burton's work chiefly affected the ground-floor windows, which, in place of the severely rectangular forms of Nash, now have elliptical heads, with architraves, swags, and keystones none too fortunate in their effect or detail. The first-floor windows appear to have escaped much alteration, and we may take it that they are practically the same as Nash built them. For the rest, we owe to Decimus Burton the extremely ornate filling to the frieze of the main cornice, the work in the pediment of the double-storeyed portico in Pall Mall, and the balustrade with the lamp standards surrounding the basement area, in place of the light iron railing originally provided by Nash. This balustrade is perhaps the most successful part of Burton's performance.

It is particularly difficult to reconcile the work of Burton on this building with what he did at the Athenæum, on the other side of Waterloo Place, and it can only be explained by the change in public opinion during the intervening years and the resultant effect on the architect.

In the mass the building is still a fine and striking structure, and though there is something to regret, there is still much to admire. Internally the most impressive feature is the grand staircase, which must rank amongst the great examples of London.

The plan is interesting and a little unique by reason of the position which the staircase hall occupies in the building. This is approached from the side by the main entrance in Pall Mall, through a small columned outer lobby, and the main staircase centres on the front of the Waterloo Place side, a fact which has led some to believe that the portico which originally occupied this side and was pulled down by Decimus Burton, was used as an entrance from Waterloo Place. There is, however, no evidence of this, either in Nash's perspective or in the records of the club. Probably the chief purpose that Nash intended this portico to serve was to balance the mass of the main portico, and to form a corresponding feature to the Athenæum porch on the other side of Waterloo Place.

The library of the club, on the first floor, facing the gardens of Carlton House Terrace at the rear, and extending the whole length of this front, is a finely proportioned room of generous dimensions. In the disposition of its parts it follows much the same plan as the libraries of the Reform and the Athenæum—that is to say, it is divided into three unequal bays, with columns and entablature. It would seem that Nash was the originator of this type of plan for the larger apartments of a club, though doubtless prototypes of a similar character may be found even earlier than this. Whoever originated it, this type of plan with the three fireplaces, one in each of the end walls, and one in the centre of the long wall opposite the windows, is particularly suitable for any room in which provision is desired to be made for the grouping together of individuals in an easy and comfortable manner.

THE ATHENÆUM CLUB.

On the opposite side of Waterloo Place is the Athenæum. It stands on what was the west end of the courtyard of old Carlton House, and was erected from the designs of Decimus Burton in 1830, at a cost of £35,000. The architect was only twenty-seven years of age when he received his commission for the building, and it is doubtful if he ever built anything in later years of equal importance which so adequately represented his skill.

In his day the productions of Stuart and Revett were the guides of the "orthodox," and Burton accepted them without question; he never displayed that masterly adaptation and distinctive application which mark the works of Elmes and Cockerell, and he never appears to have had the slightest hesitation in using Roman and Greek motifs more or less indiscriminately. His work is chiefly remarkable for its refinement and restraint, for a feeling for fine though not original detail—qualities which are particularly well exemplified in this building. If anything, he would appear to have had a leaning towards Roman rather than Greek prototypes, though he designed many buildings in the fashionable Greek manner of his time. The exterior of the Athenæum is certainly more Roman than Greek, and, with the exception of the Parthenaic frieze (which was modelled by the Scottish sculptor John Henning, at the instance of Croker, a somewhat strong-willed member of the club, who insisted on this feature being introduced), there is nothing on the outside of the building that in any way represents Greek architecture.

A noteworthy feature of the exterior is the balcony dividing the two storeys. The skilful treatment of this is particularly worthy of study. It is no mere affair of a ledge interrupting the vertical rhythm of the building, but has rather the appearance of growing out of the main walling, and the sweeping lines of the simple but strongly-marked brackets carry the eye upwards to the overshadowing cornice which protects the frieze.

A very good example of Burton's indifference to the rigid claims of style is seen in his design for the entrance hall of the club, which has a Roman barrel ceiling, richly coffered, supported by Greek Corinthian columns modelled on the well-known example from the Tower of the Winds at Athens. The effect of this hall, with the grand staircase on the central axis branching into two flights from the first landing—the approach in a subdued light, and the staircase brightly illumined by a large octagonal skylight placed centrally over it—is extremely impressive. The present colour-scheme, carried out under the direction of the late Sir Lawrence Alma-Tadema, is a most effective one. The columns are a golden-yellow colour, with solid gilt caps. The ceiling is cream, with slight enrichments in colour, and the walls are picked out in various shades of lemon-yellow. The marble dado to the staircase was put up about twenty years ago; it is finished with a Greek fret of a dark bronze colour, picked out with a thin silver line. Alma-Tadema was also responsible for gilding the statue of the Belvedere Apollo (a copy, of course, of the original in the Vatican) that occupies the recess on the landing at the head of the first flight of stairs, and for the design of the surround to the clock, which is a delicate interpretation of Greek ornament executed in bronze. This hall is altogether very harmonious in effect, and the club owes much to Alma-Tadema's wonderful feeling for colour.

The various rooms of the club are grouped symmetrically around the staircase. The coffee-room (Fig. 5), on the ground floor, occupies the whole of the left-hand side and looks out on to the gardens of Carlton House Terrace. The ceiling of this room is divided into three bays, with a large and beautifully enriched Greek circular centre-piece to each, from the middle of which hang the original fittings, designed by Decimus Burton, for oil lamps, now adapted for electric light.

Passing to the first floor, we enter the finest apartment in the building. This is the drawing

room, a chamber of noble proportions occupying the whole front of the club. It is divided into three bays with coupled Corinthian columns, following much the same plan that Barry adopted for his principal rooms in the Travellers' and the Reform, and first employed by Nash in the United Service. The bays at either end are square on plan, and the central part, which is rectangular, has a large elliptical dome in the ceiling over. The chimney-pieces on the long wall and at either end, and the doors, are fine examples of Burton's feeling for crisp and delicate detail. The ornament may be Stuart and Revett's, but it is used imaginatively and to good purpose.

The library is one of the chief glories of the Athenæum, as befits a literary club. The books, which number about 75,000 volumes, are stored chiefly in the room called the South Library, the walls of which are lined with books from floor to ceiling. The North Library is a smaller apartment on the opposite side of the club, while the drawing, smoking, and other rooms are also filled with books.

The club has played an important part in the history of artistic and literary London since the time of its inception; and it is of some interest to architects to know that Sir John Soane, R.A., was one of the original members of 1824.

THE TRAVELLERS' CLUB.

Proceeding along Pall Mall East, the next club to the Athenæum is the Travellers', which was built in 1832 from the designs of Charles Barry, for what would now seem to be the very moderate sum of £23,000. It was one of the architect's first commissions, and his adoption of the astylar treatment in the manner of the earlier Italians, at a time when no building of any pretensions was considered complete without its columnar front, together with the beautiful character of the design, made this building famous. Less impressive in effect than the Reform, with its elevations finished in stucco in place of the more costly stone, it has nevertheless an appearance of elegance and distinction, and more than holds its own when compared with either the Reform on its left or the Athenæum on its right.

Barry may in a sense be said to be the father of our modern cosmopolitan architecture, that eclecticism of taste which, both here and in other countries, finds expression in the direct application to foreign models for the purpose of expressing modern design.

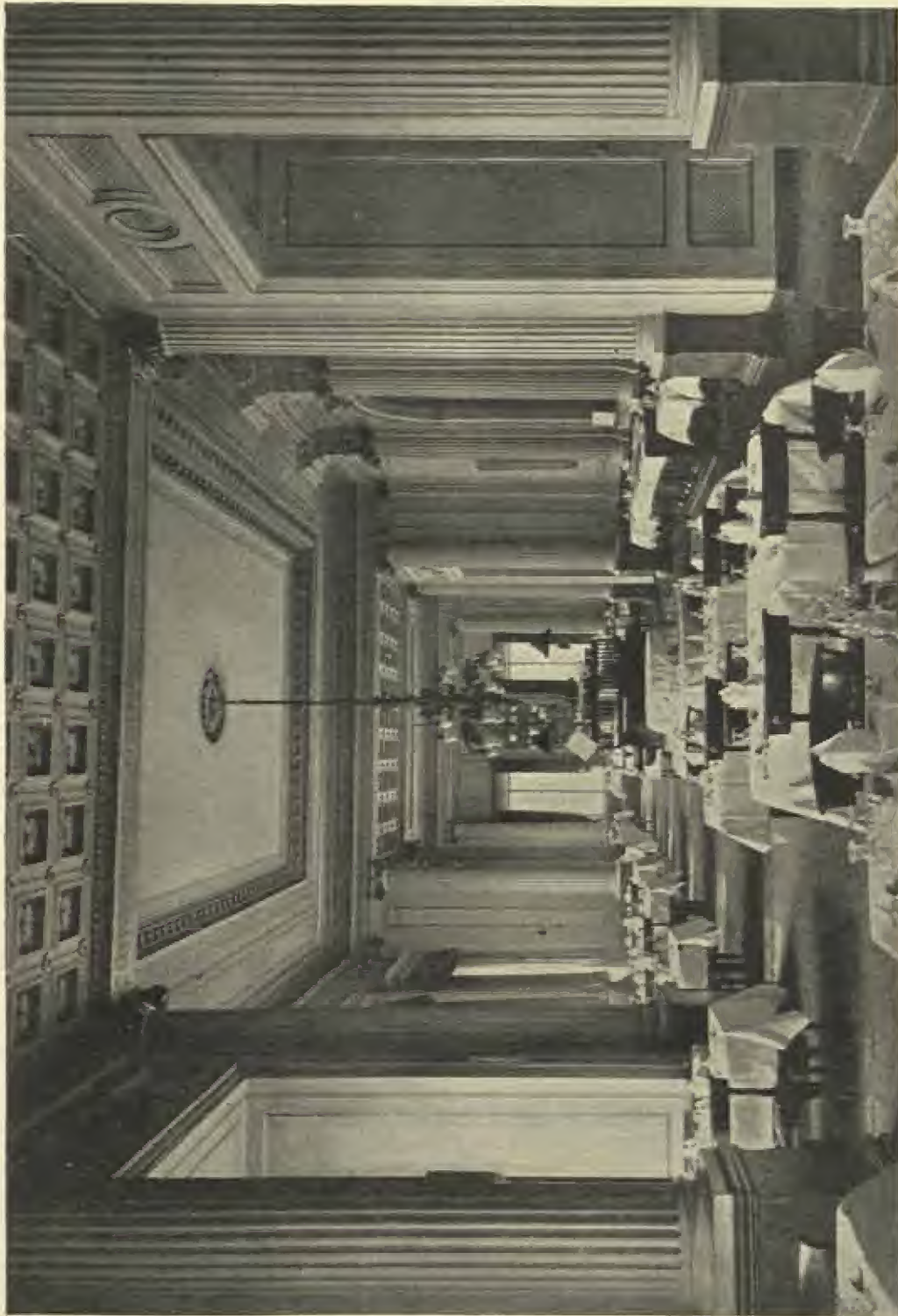


FIG. 7.—THE REFORM CLUB, PALL MALL
Coffee Room



FIG. 8.—THE CARLTON CLUB
Morning Room

Although a comparatively young man when he designed the building, there is no sign of immaturity in the general scheme or the elevations, but the detail of some of the internal work is a little mechanical and lacking in interest, and is at times even slovenly. Barry, like most of his contemporaries, seems to have profited to a much greater extent by the study of Italian exteriors than he does by that of the interiors.

The elevation of the club to Pall Mall is a masterpiece of quiet and forceful composition, the severely rectangular form, with the division of the upper and lower storeys marked by the finely executed string-course, the regular espacement of the windows, the balance between wall surface and openings, the carefully subordinated doorway, the whole crowned by a cornice of well-considered dimensions and parts, makes an irresistible appeal to the lover of the chaste and orderly. The treatment of the first-floor windows is particularly successful; the square pilasters covering the angles of the openings are, for many reasons, to be preferred to the three-quarter columns employed in the first-floor windows of the Reform, which look as if they were partially buried by the main walling of the building.

The rear façade facing Carlton House Terrace is much more original, though not less beautiful.

The plan of the building is quite as interesting and as well deserving of study as the elevations. Since 1839 certain alterations have been made; these, however, have not been destructive, so that the building remains very much as Barry designed it. On the ground-floor front to Pall Mall is the morning room, a pleasant and well-proportioned apartment. The smoking-room, originally the coffee-room, occupies the whole of the ground-floor front to the gardens of Carlton House Terrace.

The first-floor rooms are approached by an impressive looking staircase, which, by the skilful arrangement of the architect, is far more spacious in appearance than in reality. The most striking apartment on this floor is the library, of the same dimensions on plan as the smoking-room beneath. Divided into three bays by delicately detailed Corinthian columns, with the windows looking on to the gardens of Carlton House Terrace, and the pleasant effect of the white tones of the decoration and the shelves of vellum-backed books, this room has a most delightful appearance, reminding one of a secluded college library, far from the noise and roar of London streets.

The Pall Mall front of the club on the first floor is taken up by the coffee-room. This was originally divided into two rooms by a partition and folding doors, which formed the cardroom and drawing room.

One of the rules of the club is to the effect that no person is eligible as a member "who has not travelled out of the British Islands to a distance of at least five hundred miles from London in a direct line," a qualification which in these days of "short distances" has become somewhat humorous. Theodore Hook, from his corner seat in the Athenæum, satirised the Travellers' in the following lines:—

"The travellers are in Pall Mall, and smoke cigars
so cosily,
And dream they climb the highest Alps, or rove
the plains of Moselai.
The world for them has nothing new, they have
explored all parts of it;
And now they are club-footed! and they sit and
look at charts of it.

THE REFORM CLUB.

The Reform Club (Fig. 6) owes its name to the famous Bill of 1830-32.

Its first meetings were held in Great George Street and in Gwydyr House, and from the choice of the well-known building in Whitehall the members of the Reform would appear from the very first to have held high ideals as to the fitting architectural character of their home.

An open competition for the design was held in 1837, when Barry—in preference to Blore, Basevi, Decimus Burton, and C. R. Cockerell—was awarded the first place, and received the commission.

The responsible members at that time had generous notions concerning their building, and they set an example which might with advantage be more frequently followed by modern committees. They commissioned their architect to build "a larger and more magnificent house than any other," in face of which incitement to excel Barry displayed a notable restraint in the handling of his design, so that, in a street of modern palaces, the Reform more than holds its own for stateliness of conception and dignity of treatment, and yet is notable above all for its extreme simplicity and repose.

The front to Pall Mall, with its rhythm of plain wall surface and regularly spaced windows, undisturbed by any extraneous additions in the shape of columns or pilasters, with its frowning cornice of majestic dimensions, its outer guard of protecting parapet walls, and the finely detailed lamp standards, has such an appearance of splendid solidity that the doorway, beautiful as it is, is at first sight felt to be almost an intrusion. The treatment of this doorway was one of the greatest difficulties that Barry experienced in the working out of his design. He considered, and rightly, that a porch treatment would be altogether out of place, and though in deference to the suggestions of critics he tried various columnar and pilaster treatments, all of which he felt were too disturbing to the uniformity of his front, he finally abandoned them in favour of the direct simplicity of the executed design.

Barry has been frequently charged with copying the Farnese Palace, and though the great difference between the two buildings has been pointed out, there is a certain truth underlying the contention, which has been badly expressed in a general charge of plagiarism. The real genius of the architect was shown by the selection for his study of that period of the Renaissance which was most expressive of the dignity of the private citizen, as seen in the palaces of Rome and Florence, one of the most easily remembered and impressive of which is the Farnese. Though the memory of the Farnese may perhaps have inspired Barry, a critical observer with a knowledge of both buildings would no more accuse him of plagiarism than he would accuse Inigo Jones of having copied one of Palladio's buildings in his design for the Banqueting Hall in Whitehall. From the study of the palaces of the mid-Renaissance period, Barry, by a wonderful transmutation, achieved a building as distinctive in its individuality and as expressive of its purpose as any of the works of San Gallo, Peruzzi, or Michael Angelo. His example has been widely followed both here and in America, and in a sense he may be said to be the originator of the great modern club. McKim's design for the University Club in New York may be cited as a recent example of a similar treatment.

In the original plan for the Reform Club the central portion of the interior was occupied by an open Italian cortile, but in carrying out the work this was roofed in, and in its place we have the

magnificent central hall, 56 feet long by 50 feet wide, with its two colonnades, the upper Corinthian and the lower Ionic. The roof of this hall is formed of narrow diagonal ribs of iron with glass let in between, giving an ample and well-distributed light, while maintaining the character of the design. This central space was not obtained without some sacrifice. The provision of such an area usually necessitates some curtailment of the grand staircase, and this is true of the Reform, though it is a peculiarity of Barry's plan that he always reduced his staircase to somewhat modest dimensions, as if he feared that the undue importance of this feature might detract from the dignity of the whole.

The Reform Club shows more clearly perhaps than do any of Barry's other buildings that wonderful balance which he maintained between practical requirements and artistic expression. The plan has a directness and simplicity of treatment which it would be difficult to improve upon, particularly with regard to the axiality of the corridors and entrances to the various apartments and the espacement of the windows, which have been as carefully considered in relation to the different rooms they light as in the external elevations.

On the ground floor is the spacious coffee-room (Fig. 7), running the whole length of the south front. The colour scheme is gold and cream, and the detail has a fresh crispness and a Greek delicacy somewhat reminiscent of the work of Peruzzi, though not equal to the latter in surface values or actual knowledge of form. The room over, of corresponding size and proportions, is the club library.

THE CONSERVATIVE CLUB.

The Conservative Club, though geographically situated in St. James's Street, in design and character belongs to the Pall Mall group. Historically, it is the link between the Oxford and Cambridge and the Carlton. It is a typical building of the Early Victorian period, exhibiting, as do most of the works of the architects of this time, a curious fusion of Greek and Italian motifs with a good, strong dash of Roman. The majority of the Early Victorian architects had been educated in the severe school of the Greek Revival, and, as if chilled by the frigidity of this atmosphere, they turned away to warm themselves at the fire of the Italian Renaissance. Occasionally they burnt their fingers.

The design for the Conservative Club was the joint work of George Basevi and Sydney Smirke.

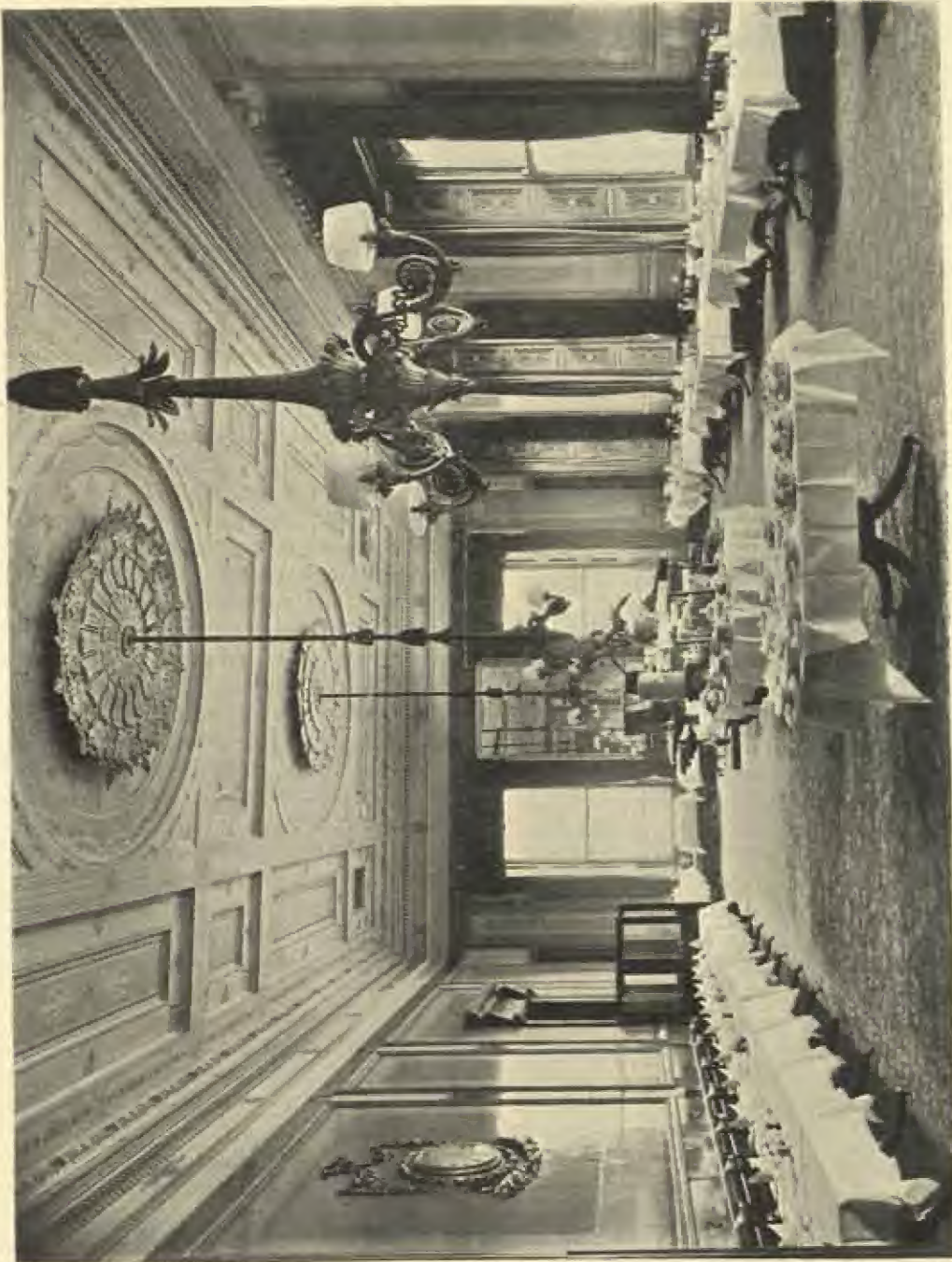


FIG. 5.—TIM ATHENÆUM CLUB
Coffee Room

Basevi was probably one of the first English architects to appreciate thoroughly the genius of Peruzzi, as is instanced in a house which he built in Belgrave Square, the entrance door of which is directly inspired by the Italian master's famous door for the Massimi Palace, Rome. During 1836-37 his colleague, Sydney Smirke, in conjunction with his brother Robert, was engaged on the erection of the Oxford and Cambridge clubhouse in Pall Mall, an experience which must have been of great use to the younger brother when he came to build the Conservative and Carlton Clubs. It is recorded of the design for the Conservative Club that the exterior was the joint work of both architects, but that the interior decorations on the ground floor were exclusively finished from Basevi's designs, and the first floor from those of Smirke.

The elevation towards St. James's Street is divided into two storeys, the lower or ground floor being of plain ashlar with rusticated joints and square-headed window openings, and the upper or first floor being divided into bays with three-quarter Corinthian columns attached to the walls, and separated from the ground floor storey by a projecting balcony carried on brackets. The façade is divided into three parts, the two end portions being treated as slightly projecting pylons with flat pilasters engaged to the wall surface by means of quarter pilasters. The central part is divided into five bays at first-floor level, with the Corinthian columns referred to above, each bay being filled with a rectangular window-opening finished with a straight pedimented head. The end or pylon bays are treated with three-light windows, the central part having a corresponding pediment to the windows of the intermediate bays. The treatment of these three-light windows, though a favourite motif of the architects of this time, and one which was used much by Pennethorne and others, cannot be altogether commended. Bridging in as it does the whole of the space between the pilasters, and carrying a great depth of unpierced stonework above, crowned with a rather heavy blocking course and balustrade, it has an appearance of weakness.

On the ground floor of the pylons, at either end of the façade, are two projecting porches of the Doric Order, the one on the right hand serving as the entrance to the building, and that on the left being filled in with a projecting bow-window. The treatment of these two end or pylon bays is the

weakest part of the whole design. The attachment of these porches to the main structure is very unhappy, and the wholly unnecessary effort after symmetry, which has resulted in the filling-in of the one with the bay-window referred to, largely detracts from the good appearance of the front.

Though in no way comparable to the Reform Club, the elevation of the Conservative is a sober and dignified piece of work. We are apt to smile at the crinolined propriety of the Early Victorians, and to be depressed by the evidence of their undoubted seriousness; but, with all their staidness of demeanour, we must admit that they had a certain dignity of bearing.

The plan of the club is in no way a remarkable achievement. There are two halls, an inner and an outer, and beyond the inner hall there is the main staircase. The inner hall proper is a circular apartment, extending up through the two floors of the building and covered over with a glass dome of simple but good design. The lower part of the hall has a series of arches decorated in colour somewhat after the manner of the Raphael arabesques. This work was painted by Mr. Sang, by whom, after long years, it has since been decorated. The design for the lower part of this hall, together with the morning room and the coffee-room, are from the designs of Basevi. The entrance vestibule, opening directly on to the street, is an essay in the use of the Doric Order, and is probably one of the best portions of the interior. The coffee-room is a finely proportioned apartment, the appearance of which is rather spoilt by the filling-in of the windows with obscured glass in the form of lead-glazing. The pendant fittings in this room are particularly good; they are the original oil lamps, adapted for use with the more modern electric light. The morning room has rather an interesting ceiling, in which one may note the effect of the freer influence of the Italian school in the light festoons framed by the severe lines of the Greek fret and the large circular moulding (of rather coarse detail).

THE CARLTON CLUB.

To return to Pall Mall, the next club to engage our attention is the Carlton, which is more than a club—it is an institution. Built in the Italian manner favoured in the 'fifties of last century, at a time not usually considered to be altogether favourable to the finest expression of the Arts, it is never-

theless an exposition of a very complete and definite idea.

In dealing with the Conservative Club I referred at some length to the work of Sydney Smirke, the architect of the Carlton; and though there is little which I wish to add to my former criticism, it may be of interest to make a few comparisons between the Carlton and its immediate neighbour, the Reform. Both are due to direct Italian influence; but whereas Barry sought inspiration from the Farnese Palace at Rome, Smirke took as his model Sansovino's famous Library at Venice, and it is their different choice of motifs that explains much that is of peculiar significance when comparing the two buildings. The work of San Gallo at the Farnese is, together with that of Peruzzi, much more akin to the Greek than that of Sansovino and Palladio, which is essentially Roman in spirit. The transition from the Greek tradition of the elder Smirke and his contemporaries to the Italian of Barry is natural and quite comprehensible; there are many similar qualities which are inherent in both styles of building; there is the same breadth and simplicity of treatment, together with the same careful consideration of detail. The change from the "Italian" of 1836 to that of 1850 is really much greater and more violent, when the spirit rather than the concrete expression of the design is considered. The quality of reticence then gave way to that of display, and it is not surprising to find that the sculptor-architect Sansovino, with his love of magnificence and ornate decoration, was followed in preference to the less showy but more capable men who served as tutors to Barry.

Originally founded by the Duke of Wellington and a few of his most intimate political friends, the club was first established in Charles Street, St. James's, in 1831. In the following year it removed to larger premises at Lord Kensington's house in Carlton Gardens—from which, presumably, it takes its name. In 1835 Sir Robert Smirke, brother of Sydney Smirke, was commissioned to design a new club-house, which was erected in Pall Mall in 1836. The membership increased so rapidly that in 1846 a large addition was made by Sydney Smirke, who, in 1854, rebuilt the whole house as it exists to-day.

The plan of the club is a great advance on the plan adopted by the same architect for the Conservative Club. Entering from the Pall Mall front, one passes through a vestibule, up a short flight of

steps, into a large square hall, which extends through the two storeys and has an octagonal opening with balustrade around at first-floor level. The grand staircase leads up from this inner hall, facing and on the same axis as the entrance door. On the left-hand side of the hall is the morning room (Fig. 8), a spacious and dignified apartment with five windows to the side street leading to Carlton House Terrace, and four overlooking Pall Mall. The writing room, opening off one corner of the inner hall, is a delightful apartment; its cream-coloured plaster-work, oak window surrounds, and red hangings constituting a very mellow combination; it is a room that forms a welcome retreat from the rather too impressive appearance of the rest of the building. On the right-hand side of the entrance hall is the magnificent coffee-room, probably the finest interior that Sydney Smirke ever designed. This is 90 feet in length, with a width of 36 feet, divided into three bays by coupled Corinthian columns and pilasters having shafts of green marble.

THE ARMY AND NAVY.

On the opposite side of Pall Mall to the Carlton is the Army and Navy, at the corner of King's Street leading to St. James's Square. Externally, I consider this is one of the finest club-houses in London. It was built in 1848 from the designs of Messrs. Parnell and Smith, who adopted as their model the Palazzo Rezzonico at Venice. The interior of the club is a little disappointing, the decorations being based on a rather free interpretation of Victorian Baroque.

I have confined myself this evening to certain of the historical clubs, and have not attempted to deal with the modern development and planning of club buildings. Another paper might well be devoted to this subject by someone much more qualified for the task than I am. But in conclusion I should like to mention one modern club in Pall Mall—the Royal Automobile, by Messrs. Mewes and Davis—because this marks a definite break with the old form of club-house and inaugurates a new era in club design. In effect, the Royal Automobile Club is something more than a club, and has some of the characteristics of an hotel—it is the largest of all the London clubs; in fact, I believe it is the largest club building in the world—and I think you will agree with me that architecturally it quite holds its own when compared with any of its distinguished neighbours. When it was first erected the French

character of its design was somewhat severely criticised as being out of place in a street of Italian palaces. But if we accept the fact, which I think can scarcely be denied, that it is French architecture that has been the dominating influence in the design of the public buildings erected in this country during the first quarter of the present century, then the Royal Automobile Club is as true an expression of our age as were the Anglo-Italian buildings of the Early Victorian.

There are several other clubs, both new and old, which I should have liked to have dealt with had time allowed. Many of those I have omitted are as important socially as their architecture is interesting. The chief object I had in view in making my selection was to give as far as possible some connected history of club building from about 1760 to 1860, the great period of club design, and as a contrast and a climax a few notes on the Royal Automobile.

Discussion

The PRESIDENT (MR. PAUL WATERHOUSE, M.A.) IN THE CHAIR

The PRESIDENT: I have the pleasure to call upon Lord Justice Warrington to propose a vote of thanks. Lord Justice Warrington, among other distinctions, is Chairman of the Committee of the Athenæum, which is the club I have reason to think is the best of all clubs. I am sure you will be pleased to hear him on the subject.

The Right Hon. LORD JUSTICE WARRINGTON: Mr. President, ladies and gentlemen,—As you have just heard, it has fallen to me to move what I am sure will be heartily responded to, a vote of thanks to the lecturer for the extremely interesting and instructive paper which we have just heard. As a layman, I do not feel myself competent, in a company of architects, to express any views on the relative architectural merits of the buildings which your lecturer has described, and which have been exhibited on the screen; but I may perhaps be at liberty to express what occurs to me as a matter of taste in reference to several of the buildings of which pictures have been exhibited to us.

To myself, the buildings of the eighteenth century are far the most attractive, and if I may say which of those buildings attracts me most, it is, I think, St. James's Club, in Piccadilly. The design of the building, and more especially perhaps its façade, seem to me to be an example of the simplicity and the dignity which characterised much of the eighteenth century, not only in architecture but in the other arts as well. It carries a feeling of peace with it, just as does much of the literature of the same period. When we come to the building of a rather later period, the most attractive, to my mind, is the Travellers' Club. The simplicity of its façade and the beauty especially of the rear front, distinguish it from all the other buildings which have been exhibited to us to-night. With regard to the United Services Club—and now perhaps I am venturing on what I said I would not touch—architectural criticism—one thing which struck me as an architectural defect in the original design was the portico on, I think, its western side, which seems to have no meaning. Is it not really a mistake to put upon the face of a building something which ought to be the entrance to it? As it is, it seems to be

merely an excrescence. Compare it with what it was said to balance on the other side of Waterloo Place, the portico of the Athenæum, and you see the contrast at once. The portico of the Athenæum is a dignified entrance to a dignified building; but the portico opposite of the United Services Club, seems to be meaningless, undignified, and not beautiful.

As we come down to later times we see, I think, in taste at all events, a deterioration. I think the only building of the mid-Victorian age is the Carlton; and here one distinctly indicates that taste is on the down grade. I was especially struck—I had not noticed it before—with the heavy cornice, which seemed to me unfitted to a building in other respects so dignified. The Automobile Club goes back to the simplicity and plainness of the buildings of the earlier period, which is perhaps a good augury for the buildings of the future. I think anyone who walks about London cannot help being struck with the greater beauty of the buildings which have been erected, say, within the last thirty years compared with those which were erected before that time.

I am afraid I have gone beyond my brief, which was to move a vote of thanks to the lecturer. If so, I hope you will forgive it, and respond heartily to the motion which I have to propose, namely, that a hearty vote of thanks be accorded to Mr. Ramsey for his most interesting address.

General SIR HENRY MACKINNON (Chairman of the Traveller's Club) seconded the vote of thanks.

Mr. A. J. DAVIS [F.]: I have listened with the greatest of interest to this instructive paper; I have only one fault to find with it—it was too short. There are so many interesting buildings which are the homes of clubs in London that one would have liked to hear discussed, and see illustrated, but one realised in the time at the lecturer's disposal that it would be impossible to deal with all of them. Another thing I would mention is, that of late years there has been a great transformation in the clubs; the plans of modern clubs are far more complicated and have to

deal with many more requirements than were necessary in the old days. In the eighteenth century, and even in the early part of the nineteenth century, a club contained very few rooms, and most of them were large public rooms, and the services and the requirements generally were much simpler than at the present day. Various modern clubs have to deal with all sorts of new developments, and their members require all kinds of facilities which necessarily make the plans more difficult and complicated. The display of taste was far greater in the eighteenth century than in the nineteenth, and it is to be hoped that in the future a greater simplicity will be shown than in the nineteenth and early twentieth century clubs. I do not think many new clubs will be erected in London, as funds are difficult to obtain for this purpose, but old buildings may be converted to club purposes, and very satisfactorily too.

Mr. F. R. HIORNS [F.] : I hardly feel competent to discuss this subject, but I have been very keenly interested in the paper. It has always seemed to me that a very interesting feature of what the lecturer called the Pall Mall group of clubs is, that they really constitute an architectural "Latin Quarter" of London; we have there a group of buildings which are very distinctly representative of Italian architecture. When we go through that part of London we are reminded very vividly of Venice and of Rome; we can see, as the lecturer pointed out, the qualities of Palladio and Buonarroti.

A club offers, I think, a very great opportunity for an architect, because, certainly, as far as the early eighteenth century clubs were concerned, the conditions of the planning were relatively simple, and the nature of a club requires that it should be treated in a very refined way, and with great dignity. We find that unquestionably in the very wonderful Italian buildings of Sir Charles Barry. There are very few finer buildings in London than the splendid group which includes the Athenæum, the 'Travellers' and the Reform Clubs. I think the general aspect of Pall Mall from that end, and particularly the view that one gets from near the Duke of York's column is more suggestive of Imperial Rome than anything I know of in London. It is a source of great delight to an architect to view these very stately and dignified buildings. If it is true, as Emerson said, that conversation is the laboratory and workshop of the student, then, I think, we shall always require clubs that will offer an opportunity for people to sharpen their wits upon one another; and if it is true also that architecture forms a very important part of our environment—as I think it undoubtedly does—it is only right and fitting that the use of a club should be associated with the very finest and noblest aspect of architecture. I am sure those architects who produced the very fine series of buildings in the first half of the nineteenth century felt that that was so; they are a series of buildings of which we have every reason to feel proud.

I have very great pleasure in supporting the vote of thanks to the lecturer.

The PRESIDENT : In the absence of further comment, it falls to me to put to you the vote of thanks. And I should not like to do it without saying a few words on my own part.

I think the lecturer has handled the subject, which might have been found a difficult one, in an able way. It is not easy, as those of you who have tried this kind of lecturing know, to string together an account of a number of buildings in such a way as to make a connected and interesting whole; it is, on the other hand, easy to fall into the habit of producing a mere catalogue accompanied by slides, rather than an essay illustrated by slides. To-night we have had such an essay, and I am sure we feel very grateful to Mr. Ramsey for the pleasant form in which he has put these facts before us. Especially are we grateful to him for having shown us, by his illustrations, a number of buildings which, to most people, are more or less inaccessible. Even assuming that everybody in this room is a member of one of the clubs which have been shown to-night, it is impossible that many can have seen all the others, and it was to me of great interest to have a comparative view of the clubs of London.

One must remember, as one looks down Pall Mall and criticises, as some have done, that the Carlton suffers very much from the skin disease which has been upon it for so many years. The unfortunate selection of Caen stone for that building has been a standing warning to architects not to use it. It is a great misfortune to the building itself, as it will inevitably have to be restored, at some time or other. It has a very depressing effect on what, to my mind, is a very fine design.

Mr. Davis made a remark which struck me as being very interesting; it chimed in with something which occurred to me during the evening. When I saw the plan he and his partner made for that wonderful Automobile Club I realised, as they did, that their problem was a different affair from the problem which confronted the older men; the older men had mere child's play to perform in comparison with what Mr. Davis and his partner carried out. That is a remarkable fact in its way, but we cannot argue from it that the old-fashioned plan is done with. After all, the old-fashioned clubs and old-fashioned plans are not neglected as out of date; they are very popular clubs, and some are the hardest to get into. The fact about the Automobile is that it is a club of a different character. It is, of course, of enormous size, and has a very large membership in comparison with other clubs. I can only say further in regard to it that I heartily congratulate the authors of that marvellous plan. When one saw it on the slide this evening and compared it with the simpler problem of the older architects, one could only feel that the modern generation is capable of grasping problems which

might have puzzled some of the older architects. I should like, now, to add my personal thanks to the lecturer for the most interesting discourse he has given to us.

Mr. S. C. RAMSEY: I have to thank you very heartily for the kind way in which you have received my paper this evening. I felt that I had a splendid subject, but I also felt a little nervous as to whether I should treat it properly. At the beginning I realised what our President pointed out, the danger of stringing together a series of comments on slides, which I particularly wished to avoid.

I should like to thank Lord Justice Warrington and Sir Henry MacKinnon for the kind things they said. I was particularly struck with Lord Justice Warrington's criticism of the United Services Club. When I saw the original perspective showing the portico I came to the same conclusion, that this must be the entrance to the Club. The drawing showed no door on the portico; and I think it is a very genuine and real criticism to object to a feature which appears to serve as an entrance, but does not.

[The author desires to express his indebtedness to the proprietors and editor of *The Architectural Review* for permission to reproduce the illustrations in his Paper.]

MR. G. GILBERT SCOTT, R.A.

Mr. Gilbert Scott has replied to the Resolution passed at a recent meeting of the Institute congratulating him on his election as Royal Academician. In his letter Mr. Scott writes:—

"I am exceedingly obliged for your letter of the 4th inst., congratulating me on behalf of the R.I.B.A. on my election as a Royal Academician.

"The pleasure that I naturally feel at the honour that has been done me has been very greatly enhanced by the numerous kind letters on the subject that have reached me, both from personal friends, and from various architectural societies.

"I feel very sensible of the difficulties of keeping one's work up to the standard that the distinction implies, but I shall always try to do the best I am capable of in the interests of architecture, and any failure on my part will not be for lack of endeavour.

"I shall be very much obliged if you will kindly convey to my fellow Members of the R.I.B.A. my very sincere thanks for their kind congratulations."

Mr. Gilbert Scott [F.], who is the son of the late George Gilbert Scott and the grandson of Sir Gilbert Scott, was born in 1880. His principal works are:—Liverpool Cathedral; Church of the Annunciation, Bournemouth; Chapel of the Visitation Convent, Harrow; St. Maughold's Church and Presbytery, Ramsey, Isle of Man; St. Joseph's Church and Presbytery, Sheringham, Norfolk; Restoration works, Chester Cathedral; St. Paul's Church, Derby Lane, Liverpool; new Catholic Church, Northfleet.

Exhibition of Seventeenth Century Architectural Drawings

A special meeting was held in the great gallery of the Institute on 11th May, when Mr. J. Alfred Gotch [F.], F.S.A., delivered an address on the exhibition of the Smithson and Webb drawings, which had been lent to the Institute by Mrs. Coke and Sir Vere Isham, Bart., their respective owners.

The chair was taken at 5 p.m. by the President, Mr. Paul Waterhouse, who introduced the lecturer to the audience.

Mr. J. A. GOTCH: I ought to say that the few words I am going to address to you this afternoon are hardly worthy of the name of lecture. They are just put together in order to point out the principal features in connection with the Smithson drawings. Those done by John Webb, which are also exhibited here to-day, were fully described, together with the most interesting letters which accompanied them, in the JOURNAL of a month or two ago; the major part of the drawings which are now exhibited are from the Smithson collection.

There are several collections of architectural drawings preserved from the past which are of great interest from various points of view. They illustrate not only the draughtsmanship of their period, but also the methods of design then prevalent; they sometimes enable us to assign buildings to their real designers, and they have frequently a singular personal interest. Beyond this, they are of great value in studying the evolution of house-design in particular, for they show at first-hand the ideas of the designers, and are therefore in this respect even more useful than the houses themselves, since the latter have nearly always undergone alterations from time to time, whereby their history has been unavoidably obscured. The chief of these collections which have come down to us from the past are those of John Thorpe, Smithson, Inigo Jones and Webb, Sir Christopher Wren and James Gibbs, a series which covers almost completely the start and full development of the classic manner in the architectural treatment of English buildings.

The Smithson collection is connected with the first third of the seventeenth century, and it overlaps in an interesting way those of John Thorpe and Inigo Jones and Webb. Thorpe covers the period from 1570 to 1621, which is the latest date recorded on his drawings. The Smithson collection has 1599 as its earliest date, 1632 as its latest, but most of its dates range round 1620. All the drawings are not dated, but those that are range chiefly round that period. The Jones and Webb

drawings begin in point of date with the Banqueting House at Whitehall of 1619, and they end in the sixteen-sixties.

The questions which present themselves at the outset are: Who was Smithson? What are his drawings? The answers are not quite as categorical as could be desired. The first mention of Smithson drawings is in a record of their purchase at Lord Byron's sale by the Rev. D'Ewes Coke in 1778 or 1789, and they have been preserved in the Coke family ever since. They are now kindly lent to us by the present representative of that family. Walpole says they came into Lord Byron's hands by purchase from the Smithson family, and there is this to be said: that the Byron seat at Newstead Abbey is not far from Nottingham, and that the Smithson drawings are largely concerned with houses in that district. The Smithsons appear to have lived at Bolsover, which is not very far away, and one of them, Huntingdon Smithson, is handsomely buried in Bolsover Church. They were a family of architects. The decidedly local flavour of a large part of this collection is all the more interesting when we remember that John Thorpe, Inigo Jones and John Webb all practised in London, and it furnishes another proof, if such were wanted, that architectural talent is not confined to the Metropolis.

Huntingdon Smithson is perhaps the best known of his family, partly by reason of his handsome memorial, and partly by reason of his name being recorded by Walpole—not altogether rightly—as the designer of Bolsover Castle. Doubtless, we owe some of the drawings to Huntingdon, but probably more to his father, John, who died in 1634, because the only Christian name of a draughtsman to be found on the drawings is John, appended as "Jo. S." to a drawing of some panelling at Theobalds given on No. 66. There was also a Robert Smithson who died in 1614, and who lies buried in Wollaton Church, near Nottingham, for whom his epitaph claims that he was "architector and surveyor unto the most worthy house of Wollaton." There is no direct evidence that Robert was connected with John and Huntingdon; all that can be said is that he lived, or at any rate died and was buried, in their district and that his date would render it possible for him to have been the father of John. It is also worthy of note that Wollaton Hall is a connecting link between John Thorpe and a Smithson. There is no doubt that the Smithsons of the drawings were employed at Wollaton, for there are several relating to that house; but I am satisfied that it was Thorpe who originally designed it. There is a charming drawing in this collection of one of the corner pavilions (No. 72), and there are others of the lay-out and orchard (Nos. 26 and 48) as well as of the stone screen in the great hall and its panels (No. 66) where the name "Jo. S." appears.

Another great house in the same part of the country

which the Smithsons must have designed is Bolsover Castle; and I am inclined to believe that John is responsible for the square block which occupies the site of the ancient keep, and of which a plan is given on No. 2, and for the simpler part of the great gallery on the terrace; while Huntingdon may be responsible for the heavier and more ornate part of the same building. There are several other drawings relating to Bolsover, including one of the kitchen fireplace. Other drawings connected with great houses in this district are those of the Riding House at Welbeck, the stable there and a porch; a survey of Worksop Manor and a screen; several relating to Clifton, close to Nottingham, including the stable, date 1632, and a lodge. Then there is a plan for enlarging Houghton, the seat of Lord Houghton; a survey of Wyverton for Sir George Chaworth; a plan of Mr. Neville's house at Grove, near Retford; a house at "Blackwell in the Peak"; and a fine set of plans for "My Lord Sheffield" of Butterwicke, Co. Lincoln. In addition to these, there is a valuable survey of Nottingham Castle—the ancient building—made in 1617. Other castles of which there are surveys are Shrewsbury, made in 1629, and Warwick.

The activities of the Smithsons were by no means restricted to their own neighbourhood, for there are many drawings relating to Arundel House in London; surveys of Somerset House, my Lord Northampton's house; Lord Bedford's house at Twickenham; Sir Thomas Vavasour's house at Petersham; Nonesuch in Surrey, and, in particular, one of Wimbledon House, now entirely gone, which was built by one of the Cecils in 1588. This is especially interesting, for it relieves the austerity of a mechanical survey by such touches as limes "set both for shade and sweetness," and an "orchard with fruit trees and roses set among them." There are also drawings of the new building at St. James's, 1619; and my Lady Cooke's house in Holborn, 1619; Sir Fulke Greville's in Holborn, 1619; a pergola at Col. Cecil's in the Strand, and a summer-house at Chelsea. In addition to these there are two drawings made in London, relating to the Banqueting House, which are of prime importance from the historical or archaeological point of view. It is, of course, common knowledge that Inigo Jones designed the Banqueting House, and we were taught in our youth that it was the only portion ever built of a vast palace designed by him for James I. I have shown elsewhere—and need not now go into the proofs—that this idea is erroneous, and that in fact the palace was designed by Webb, Inigo Jones's pupil and a connection by marriage, for Charles I, and it incorporated Inigo Jones's Banqueting House, which was already built. These two drawings of Smithson shown on No. 14 have an interesting bearing on the Banqueting House itself, and their connection with it can be made clear in a few words. There was a Banqueting House at Whitehall, in con-

nection with the Palace, of course, in Elizabeth's time, which had been rebuilt by James I in 1607. This building was burnt down in January, 1619, and within three months Jones had designed the present building to replace it on the same site, the work being commenced in the summer. The two Smithson drawings are (1) a plan of the old destroyed building, which can be identified through a casual, contemporary description; and (2) an elevation of the ground storey of the new building.

Smithson, in common with all designers of the time, was very keen on the fashionable Italian manner, and no doubt he was struck with the very Italian character of the new Banqueting Hall, and took the opportunity, when he was in London, of making a drawing of as much of it as was then built.

Smithson's interest in the Italian manner is shown by the titles of some of the things he designed for Arundel House, which he designates "an Italian window," "the Italian grate"—that is a balcony—"the new Italian gate, 1618," and so on. You will have noticed that the dates which I have mentioned for the buildings in Holborn were 1619; here is one of Arundel House in 1618, and the new Banqueting House had begun in 1619. It is also displayed in his designs for gateways, of which he has a number, inspired apparently by books of designs published by heavy-handed Dutchmen; and also designs for tombs, of which the most interesting is that for the celebrated Bess of Hardwick in All Hallows Church, Derby, identified since the Catalogue was printed. Cecil houses have already been mentioned, and that Smithson was employed by that family is further proved by a good design for a façade, which is unidentified, but displays the Cecil crest and supporters—the shield being blank—on one of its gables.

Smithson did not confine himself to making plans and surveys in the way of business. He studied old buildings to a certain extent, for he has a small plan of King's College Chapel at Cambridge, a survey of the great quad at Trinity, a plan of Henry VII's Chapel at Westminster, and a sketch-plan of some vaulting and a sketch-elevation of a Gothic window. There is also a very careful working drawing for a wheel window of stone, which bears the earliest date of all, namely, 1599. It is rather interesting to find that Thorpe also has a plan of Henry VII's Chapel in his collection.

Most of the drawings mentioned so far are either actually named or can be identified, but there are nearly twice as many which are not named and consist largely of house plans. But, taken as a whole, the collection is fully diversified. It comprises designs for houses or for alterations; surveys of houses; lay-outs and castles; designs of gateways, fountains, bridges, windows, chimneypieces, screens and tombs. The plans are numerous, the elevations are few. But, in addition to those which are germane to the calling of an architect and surveyor, there are other designs of a different

character—a kitchen fireplace, the fittings of a brew-house, some saws, a ladder, a sieve, a pruning-knife, and an apparatus for breaking-in young horses. Neither Thorpe, Jones nor Webb has any such extraneous matter. There are a few drawings, those carrying the highest numbers, which are obviously not by Smithson; some of them are earlier in date and some later. There are also certain gaps in the numbering, which may be accounted for by the fact that a few of the drawings were once lent to Mrs. Chaworth Musters, of Colwick, near Nottingham, and, unluckily, were burnt along with the house. Many have been mounted, not always with a due regard to suitable group, and they have all been numbered, but not entirely in a reasonable sequence.

On the whole the draughtsmanship is not of high merit, although many of the plans are very neatly drawn, but the drawings serve to explain the intentions of the designer, which, after all, is the chief point. The plans are not so ingenious as Thorpe's, but they carry on the old tradition of house-planning much more completely than do Webb's. A study of them shows the trend of the time towards an altered disposition of the rooms of a house, more particularly in regard to the position and function of the great hall, which was gradually changing from a habitable room to a large vestibule. The designs are distinctly later in feeling than Thorpe's, but they are far removed both in elegance and in knowledge of Italian detail from those of Jones and Webb. The whole collection is of first-rate importance, forming, as it does, one link in that chain of evidence which brings vividly to our minds the actual methods of architectural design which prevailed during the century-and-a-half extending from Elizabeth to George II.

SIR BANISTER FLETCHER [*F.*] (rising, at the invitation of the President): I thank you for giving me this opportunity of moving a vote of thanks to my old friend Mr. Gotch. I have been exceedingly interested in the delightful way in which he has presented this subject to us. I may say that I have studied his books from the very first, and I believe he has done more than any man to make the architecture of the Renaissance, both late and early, comprehensible to the man in the street. I think we owe Mr. Gotch a debt of gratitude for taking up this subject, for acting, if I might say so, as an excavator into the past with regard to these little known architects. In making his researches he has been very fortunate in obtaining the consent of Mrs. Coke and her family to investigate the Smithson drawings. I have only been able to glance cursorily at them, but, of course, they are all of the very greatest interest to us as practical architects. I have often wondered—as I dare say many of you have—how the architects of the Elizabethan period set about designing their buildings. We know John Thorpe's book which is in the Soane Museum, and which gives us an insight into one man's

method. The drawings by Smithson and Webb are exceedingly valuable as showing how a seventeenth-century architect set about his work. The Smithson family—because there were three of them—seem to have been great students. They not only made designs, but, like all architects, they studied the work of the past; it is, therefore, of great interest to see that they, or one of them at all events, made a drawing of Nottingham Castle and other buildings which were known to them, and particularly a building which must have created a sensation when it was erected—I mean the Henry VII Chapel at Westminster. The drawings, I think, are of interest to us because they introduce something of the intimate life of the architects. They help us to understand that architects then went about very much as we architects do in these days, and jotted down interesting notes of things in relation to their profession. It is well known that the Italian Renaissance took at its beginning very little hold of the people of this country. It more or less resulted in decorative trappings on buildings which were essentially mediæval in character. In that respect I think the measured drawings of Smithson are exceedingly interesting. They show the different types of buildings that he studied. As Mr. Gotch has said, the drawings also show what a little part draughtsmanship had in the development of the Renaissance architecture of this country. That, to my mind, is rather extraordinary, because, of course, the traditional craftsmen were mediæval; their tradition was mediæval; and one wonders how, with such little detail and so few detailed drawings, such results as, for example, Wollaton Hall, could have been obtained. Recently, owing to Mr. Gotch's researches, I have been correcting a blunder about the Banqueting Hall in Whitehall which I made in a recent book of mine. Mr. Gotch has killed a tradition that the Banqueting House was part of a great scheme by Inigo Jones for rebuilding a palace for James I. His researches, which have, to his satisfaction—and, I think, to the satisfaction of most of us—drawn attention to the fallacy of that belief, are of great interest. He has shown that Webb, Jones's pupil, was the author of that design. But what I should like to know from Mr. Gotch is this: He may have found that Webb was the actual draughtsman of this great palace scheme, but does he think that Webb could have produced such a magnificent design without the training, the travel and the experience of Inigo Jones and the study he gave to the works of Palladio? I should like to hear Mr. Gotch answer that question. If Mr. Gotch were to say that while Webb was the draughtsman Jones might have been the man who inspired his design, that would, I think, go a long way towards reconciling many of us in the belief which we have always had that Inigo Jones was the author of the Palace scheme. It gives me the greatest pleasure to propose a vote of thanks to Mr. Gotch for his lecture.

The PRESIDENT: I have pleasure in seconding the vote of thanks. Mr. Gotch has succeeded this afternoon in turning what was already of interest to us into a study, and many of us will feel that we have not only had our curiosity satisfied with regard to the drawings but have acquired some little knowledge to start with on which to base further knowledge. Without the generosity of the lenders of these drawings we could not have had this pleasant afternoon's study of them. I beg you therefore to associate in your applause your thanks to Mrs. Coke and Sir Vere Isham.

Mr. GOTCH said: I am extremely obliged to you for the very kind way in which you have received this vote of thanks and for the apparently close attention which you have given to the paper which I have read. But really, to understand these drawings and to enjoy them—it is an enjoyment which perhaps everyone will not care for—you want to go through them with the Catalogue, because that explains everything as far as I was able to find it out at the time. There are one or two little additions which I have since been able to make in identification—not many. One is Bess of Hardwick's tomb, and another—a very fine drawing of Gothic work—is Bishop Fox's Chantry in Winchester Cathedral.

With regard to the point Sir Banister Fletcher raised—and it is a pertinent one—as to how Webb designed so large a building as the Palace. Of course he was a pupil of Inigo Jones, and Inigo Jones was very well versed in the Italian methods of design. There were in existence a number of books by Italian architects of the time which Jones and Webb evidently studied very carefully, as you can see from their drawings. But the real point is that in regard to identification. There are two lots of drawings: one collection of the finished drawings at Worcester College, Oxford, and another of the preliminary drawings at Chatsworth. Those at Oxford apparently are the only ones that have been generally studied up to the present. Tradition always said Jones was the author of them, but if you go to Chatsworth you find a number of other drawings which are intimately connected with those of Worcester College; some are at one place and some at the other, and it is certain that they were once one collection. You will find among the drawings at Chatsworth that there were not merely the two designs which were published by Kent and by Campbell, but you will find there were at least seven different designs, a fact which you cannot gather from what you see at Worcester College. When you examine the Chatsworth drawings you find, first of all, Inigo Jones's own drawings for the Banqueting House, which was evidently intended to be an isolated structure, and was, in fact, built to replace the old one burnt down. Then you will find, when you are able to distinguish between Jones's draughtsmanship and Webb's—a knowledge easily acquired by look-

ing through the drawings—among these seven sets of designs indications of how Webb started, and how he subsequently altered; you see his little sketches for bits of detail, and you can really trace the whole thing from his original rough sketches up to the time when the final plan was developed and carefully drawn out. You do not find a single suggestion for any of this big Palace in the handwriting or draughtsmanship of Inigo Jones. People will tell you it was not Webb who did the design; it was Jones, and Webb was the draughtsman, yet you cannot find any sketches of Jones which he may have been supposed to hand over to his draughtsman, Webb, to elaborate. You will find whole bits built up by Webb, all just as you would do it if you were doing it yourself. And to clench the whole matter: we find that Webb submitted a petition to Charles II when he applied for the post of Surveyor in which he definitely says that he spent a lot of money for Charles I, and followed him to Hampton Court and the Isle of Wight, where His Majesty instructed him to prepare a design for a great Palace at Whitehall, which he did until the King's "unfortunate calamity" put an end to his labours. I cannot help thinking that if anyone approaches those drawings free from the prejudice of ancient tradition he can but come to one conclusion about them—and it is certainly rather a remarkable conclusion—that Jones had nothing to do with the Palace except in regard to the Banqueting House. I can, in conclusion, only thank you once more for the kind attention which you have given to this Paper.

The Late P. Macgregor Chalmers,

LL.D., F.S.A. (Scot.).

We regret to announce the death of Dr. Peter Macgregor Chalmers, the well-known Glasgow architect and antiquary, which took place suddenly in Edinburgh on the 15th March.

For many years Dr. Macgregor Chalmers has occupied a foremost place among Scottish architects, and was one of the most distinguished Gothic restorers which Scotland has produced.

His apprenticeship was served in the office of the late Dr. John Honeyman of Glasgow, and he started business on his own account in 1887.

An enthusiastic student of mediaeval architecture, he carried out the restoration of a number of ancient ecclesiastical edifices, while he also designed many modern places of worship.

His eminence in his profession was recognised by Glasgow University in 1920 by the bestowal of the honorary degree of Doctor of Laws. Among the more notable of the important restoration schemes to which he devoted his special attention are those of Paisley Abbey, Glenluce Abbey, the chapel at the Isle of Whithorn, St. Monance Church, Fife, Holy Trinity Church, St. Andrews, and Iona Cathedral.

The work of restoring Iona Cathedral was undertaken after the remains of the edifice had been transferred to the Church of Scotland by the late Duke of Argyll. The excavations carried out round the site furnished Dr. Chalmers with abundant material for the repair and reproduction of the original features of the historic structure, and his knowledge of ancient ecclesiastical architecture, combined with his technical skill, enabled him to restore the dignified simplicity of the ancient building. In particular, the panelled oak roof of the Nave of the Abbey Church, and also the pavement of rubble masonry—after the fashion of the remnants discovered *in situ*—at once approve themselves as in keeping with the ancient design. The roughly built masonry, which has long blocked the eastern archway of the nave, was removed, and the cathedral was then open in its entire length.

Dr. Chalmers also carried out extensive work in connection with the restoration of Paisley Abbey, which scheme has been in abeyance for a number of years owing to war interruptions, and embraced the renewal of the choir and cloisters.

Another outstanding example of his work was the restoration of the Church of Holy Trinity, now known as the Parish Church of St. Andrews. The scheme adopted in this case was simply that of reproducing the mediaeval plan as far as possible. The galleries of the old church were removed and the side aisles reduced to their original height. The pillars and arches resumed their old place and form, and on them the clerestory was rebuilt. A new aisle was introduced to the east of the bishop's aisle, and the porch was rebuilt on its former foundations. The tracery of the windows and the moulds and decorations of the doors were in keeping with the suggestions obtained from contemporary churches.

At the time of his death Dr. Chalmers was engaged on a scheme of restoration of the University Chapel, St. Andrews. He was also appointed a few years ago architect for the proposed new cathedral at Belfast, but so far this work has not been proceeded with.

In addition to restoration work carried out on ancient edifices, Dr. Chalmers designed a number of important churches in various parts of Scotland, among these being churches in Edinburgh, Dunfermline, Elgin, Cardonald, Ardwell, Urr, Kilm, Leven, Ardrossan, Jedburgh, Crail, Carnoustie, Kilmun, Leven and Prestwick.

He was a Fellow and Past Vice-President of the Glasgow Institute of Architects, a Fellow of the Society of Antiquaries of Scotland, and a Past President of the original Glasgow Architectural Society.

He made important contributions to the literature of architecture, including a work on *Glasgow Cathedral*, *The Shrine of St. Constantine*, *The Shrines of St. Margaret and St. Kentigern*, and brochures on such subjects as *St. Ninian's Candida Casa*, *The Govan Sarcophagus*, *A Scots Mediaeval Architect*, and *Dalmeny Kirk*. He is survived by his wife.

JAMES LOCHHEAD [F.]
President Glasgow Institute of Architects.

Major-General Sir Charles Rosenthal, K.C.B. [A.], has been unanimously elected a Fellow of the Institute.

Discussion of the Annual Report of the Council

MR. H. D. SEARLES-WOOD, VICE-PRESIDENT, IN THE CHAIR

The adoption of the Report having been formally moved by the Chairman, was seconded by Mr. Arthur Keen [F].

The CHAIRMAN: The motion and the Report are now open for discussion.

Mr. Wm. WOODWARD [F]: Mr. Chairman and gentlemen, for the twenty-seventh year in succession I have traversed and criticised the Annual Report of the Royal Institute, and I hope to be able to do so again to-night. On page 353 of the Report you will be very sorry to read the list of our friends who have gone from us during the year. And amongst those whom I personally knew was my friend Colonel Holman, who was elected a Fellow of this Institute only a few months ago, although he had done admirable work during a long time past. Then there is Mr. F. W. Hunt, one of our oldest surveyors, a man well known and respected by every member of this Institute. Mr. Ernest Newton we all knew, and we all deeply regret his death. There is also Mr. Reginald Roumieu, a man who did so much for the Architects' Benevolent Society and whom we all miss. Mr. Satchell was well known to the Practice Committee, and for many years he acted as its Secretary. He was present with us at the annual meeting last year, and we all regret his death. Mr. Marks, although not so regular an attendant at the Royal Institute, was a great friend of Mr. Satchell, and curiously, and sadly, enough, they occupied the same house in Staple Inn, and died within a month or two of each other.

And now as to the membership of the Institute on page 354. The Fellows number 969, the same as last year: the Associates 2,314, as against 2,232 last year. The Licentiates 1,487, as against 1,537 last year. The Hon. Fellows and the Hon. Associates are the same numbers as last year.

I come now to "Architects and the National Housing Scheme," pp. 356-7. The report says negotiations are now going on. All I trust is—though it does not concern me financially, because I have had nothing to do with housing—that in the meantime the men to whom large sums of money are due have been paid at all events something on account, because that would be at least a recognition that they are entitled to something.

On p. 358 we have the National Building Code. A Committee has been appointed to draft a new National Building Code, and I direct your attention to these words which I quote: "It is hoped that such a Code, if embodied in a Bill, will receive the warm support of the Ministry of Health." I should like to be told, as no doubt I shall be, what a Code is, but I am surprised that you should incorporate into this the Ministry of Health. My object in life is to eliminate all persons connected with Government and Government Departments. Conditions of Contract, pp. 358-9. "The Conference has requested the Government to appoint a neutral Chairman to preside over a tribunal to which all points of difference that arise in the drafting of the Form are to be referred." Why should the Government appoint a Chairman? Why can't we manage our own business? Fifty years ago we could do so: we did not want the Government to appoint a neutral chairman, and if we had, ought he to be permitted to interfere with the work of the Institute? The Franco-British Union of Architects, p. 359. I think that is an excellent organisation, and I support it in every way. The more friendship we can secure with our friends across the water, the better it will be for all nations. Report of the Board of Architectural Education, p. 360. One matter occurs to me as to this. A friend of mine sent in a set of drawings, which were returned to him. He enquired—and very properly—why they had been sent back. He brought the drawings to me; he was a hard working young fellow. They were drawings of a ware-

house, and I thought they were excellent in every way. I suggest to the Board of Architectural Education that when drawings are rejected the man should be given reasons for the rejection, so that instead of having to do the whole thing over again, he can revise the particular part which has met with the objection of the Board. If he is told to do the drawings all over again, he gets disheartened, and he may not submit others. Report of the Art Standing Committee, pp. 363-4. The Committee express anxiety lest the Office of Works should get all the Cathedrals of England into their charge. Here is another case where, I think, the Institute should use every possible exertion to prevent the Cathedrals of England getting under the charge of the Office of Works. Each Cathedral Chapter has its own Architect, who knows his own particular Cathedral, and is thoroughly able conscientiously to preserve its beauty. If the Cathedrals were placed under the control of the Office of Works, we should have standardization, we should not get that artistic feeling which independent architects bring to bear upon the Cathedrals which are under their charge. The Office of Works have under their control ancient monuments. I am glad to find that this Institute has given a list* of the ancient monuments which have been transferred to the Office of Works, so that every local architect can tell what has been done in the matter in his own particular district. Report of the Literature Standing Committee, p. 365. This deals with the question of the Library accommodation and the risk of exposure of its valuable contents to fire, a danger that was also referred to last year. When we remember that the Library of the Royal Institute is unique—there is no such Architectural Library in the world—we shall agree this is a subject which should engage the immediate attention of the Institute, so as to make the Library, as far as possible, fire-proof. The attendances of readers in the Reference Library last year were 7,063; this year they were 7,836. I think that is a good and substantial increase; it shows the interest which is being taken in our Library. Now take the number of books issued on loan. Last year the number was 2,690; this year it is 3,754, showing, again, the interest our members are taking in the Library. Report of the Practice Standing Committee, pp. 366-7-8. The number of attendances at the meetings is stated. The only other Committee in regard to which this is done is the Competitions Committee. I think the attendances at every Committee should be given, so as to be a guide, not only for the elections, but so that we may know the men who are doing their duty as elected members of the particular Committees. Housing fees have already been referred to. The Committee says it hopes for a decision, and that it has been in close touch with the delegates. "Close touch": that is a term which is used in the House of Commons. If a Minister gets up and will not, or cannot—mostly he cannot—answer a question, he says: "I assure the Hon. Member the Government are in close touch"—that is sufficient! There is mention of a New Housing Committee; I should like the Chairman of the Practice Committee to tell me what this is. Why is it formed, what is it to do, and when will it do it? There is also a suggestion of a pamphlet on the services of architects, on page 368. Expressing only my own view, I do not think we should proceed with any such matter. Report of Science Standing Committee, pp. 368-9. With regard to research work, they say "in investigations into the problems which arise in the practice of our profession"; and I may say at once that I think this research work, this academic scientific work, is far too prominent in the work of the Institute. I think that instead of all this research work, and all these scientific investigations what we want is to take the young architect to the

* See R.I.B.A. Journal, Vol. xxix, No. 1.

site of a new building, say a warehouse, and ask him what steps he would take to find out the nature of the soil and whether it is likely to stand the weight of the building proposed to be put upon it. You want him to understand concrete and its ingredients, to be able to tell you, when he sees a heap of Thames sand and Thames ballast, which is which, and which is ordinary pit sand; you want him to be able to distinguish a good brick, to know the character of timber, whether it is good, bad, or indifferent. After having specified Portland stone, you want him to say how he discovers whether it is Whitbed or Basebed. That is the sort of education I should like to see carried on, and a diminution, to a large extent, of this academic research work. I am speaking as an old practitioner. Sir Christopher Wren, James Gibbs, Sir James Pennethorne, Cockerell, and others I could mention, built the finest buildings we have in London, yet they had none of this scientific research. Building By-laws, and Home Office Regulations. Here I think we have too many committees, and they defer and defer. Instead of No. 9, Conduit Street, we are getting towards Whitehall. If you closed down all the Government Authorities and left the work to the District Surveyors of London and to the local surveyors throughout the country, you would then get your work done more rapidly, and better than you get it done now. Report of the Competitions Committee. If you read the work of this Committee very carefully, you will agree with me that the Committee has done very good work throughout the year, as good work as any of the other Standing Committees of the Royal Institute.

I now pass to the Financial Statement and the Report of the Honorary Auditors, pages 373 and 377. The statement is short and sweet, but they show a surplus of £375, as against a deficit last year of £1,008. And I am very glad to find they have acquired the freehold of the rear portion of No. 11, Conduit Street which is an excellent piece of business.

We now come to the details of the expenditure, but I shall not trouble you with many of the items to-night. The most important is the JOURNAL. It cost £3,427 against £2,523 in the previous year. The question for the Council is, how to diminish the cost of the JOURNAL. I am told that if we bring ourselves under the Registration of Newspapers we shall save a good deal in the cost of transmitting our JOURNAL by post, which is very considerable. Could we not reduce the cost by not publishing in so lengthy a form some of the papers in large type? I find pages devoted to some of the papers read in different parts of England, and I think they might be curtailed. There are two other items I want to refer to. One is "The Designers of our Buildings" £204, the other is "Office of Works Committee £113 10s." I do not know what those two items are. The total expenditure last year was £15,455, as against the present £21,607. In regard to income, I am glad to see that we have obtained £412 this year for the use of our rooms, against £156 last year. And I am sure we shall all be glad, for more reasons than one, to see the large sums which have been paid as arrears by our Fellows, Associates and Licentiates, and the increase in the fees for the reinstatement of members.

Then there is the report of Mr. Perks as Chairman of the Finance Committee. Mr. Perks's name in connection with the finances of the Royal Institute is a synonym for economy. I admire Mr. Perks for his work on this Committee. I was myself once its Chairman when Mr. Perks was on the Committee, and he saved the Institute a considerable sum of money by the suggestions he made, as a result of his work and experience in the City of London. As to the rough estimate of income and expenditure in regard to the ordinary funds to December 31st, 1922. There are two items in that to which I should like to direct the attention of the meeting. The first is the Conditions of Contract Conference £200. I do not know what that means. Then there is the Unification Committee £100; and I should like to know what that means. They total £300.

I now come to the Staff, and you will agree with me, gentle-

men, that we can again this year congratulate ourselves on the possession of our Staff. From Mr. MacAlister downwards, my experience in these rooms is that they all work with ardour, and there is with them none of that which I am so sorry to see on buildings and in the streets, the policy of "ca canny," and it is very delightful to know that. We have lost since last year two well-trying friends, Mr. H. G. Tayler, who had been with us 47 years; and Mr. Northover, who had been with us 28 years. We shall all agree in wishing them many years of health and happiness to enjoy their retirement. And now I come to Mr. Dircks. Mr. Dircks has been with us 25 years as Librarian, and he has now succeeded our dear old friend Northover. We owe a great many thanks to Mr. Dircks for having agreed to take over the Editorship of the JOURNAL of the Institute, while still carrying on his work as Librarian. With regard to our friend Mr. MacAlister, those of us who have to see Mr. MacAlister and ask him questions will agree with me that Mr. MacAlister has made himself absolute master of the work of the Royal Institute of British Architects. There is no question you can ask—at least that has been my experience—that he will not be able to answer, showing his knowledge and his courtesy. And there is one other name. I am sorry to say that for the twenty-seven years I have addressed you I have omitted any reference whatever to the Honorary Secretary. I want to repair that omission by saying a word about our present Honorary Secretary, Mr. Arthur Keen, who has been indefatigable in his work as Honorary Secretary of this Institute. At every meeting, and he attends very regularly, he devotes himself to the work of the Institute, and we could hardly wish for the office to be filled by a better man. Our President I have left until last, but of course he is by no means least. He has only served the first part of his term so far, but he has given us a taste of his good qualities and of his ability to uphold the best traditions of the Royal Institute of British Architects and to enhance its value in the eyes of the public.

The CHAIRMAN: We shall be very pleased if any other gentlemen will make comments on the Report. I will then call upon the Chairmen of the various Committees to answer them when they have heard all the points.

Mr. P. M. FRASER [F.]: On page 356, under "Unification and Registration," I find it is stated that the Committee have entered into negotiations with the Society of Architects, I presume with regard to amalgamation, or some form of unification. The last formal and official business which was done with regard to this matter in this Institute was a direct mandate to the Council not to negotiate with the Society of Architects, and nothing has happened since to traverse that decision. It was the decision of the members of this Institute that the Society of Architects should be left out until the matter was a little further forward. On the same page, and under the same heading, it says that at a certain meeting, held on the 7th of February, a resolution was carried by a big majority but lost because there was not the necessary two-thirds majority. I was present at that meeting, and it was not until some weeks later that I heard, with the greatest surprise, that the resolution was not carried because the required two-thirds majority was not obtained. Not the slightest intimation was given to the meeting that the resolution was lost, and I want to know under what By-law that resolution was declared lost. I am told, unofficially, that it comes under, I think it is, Rule 51, but that rule states that a meeting requiring a two-thirds majority is a private meeting—in other words, one from which the Press are excluded and outsiders are not admitted. The Press were there, and a full report of the meeting was published. Moreover, there was a stranger present, because the President addressed a remark to him. That rules out the dictum that a two-thirds majority was necessary. If it was necessary, that was, *ipso facto*, a private meeting. On page 358 we have remarks with regard to a National Building Code; I would like some information on that. Has it anything to do with the Conditions of Contract,

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which are referred to elsewhere? It is a statement which, I think, requires amplification.

After asking some questions with regard to the author, publication and cost of *The Designers of our Buildings*, Mr. Fraser continued:—

With regard to Library accommodation, this question has been discussed before, and also the important question of fire protection, but nothing seems to have been done. I was asked a couple of years ago if I would give certain information which I had to the Committee. I replied in the affirmative, but I have heard nothing further since. With reference to the Standing Committees, I think the Council should insist on their supplying the Annual Meeting in their Reports with the attendances, and the Council might very well start with themselves. The only Standing Committee which gives these is the Practice Committee, and their attendances are excellent. The attendances on the Conditions of Contract Committee are not so good—50 per cent. have not attended 50 per cent. of the meetings. As to the Science Standing Committee, I disagree with Mr. Woodward; I think the Institute is a long way behind in matters scientific; and instead of dropping science, we should take up science more seriously. I suggest that a field for legitimate work for the Science Committee is research in connection with materials on which information is not readily accessible. For instance, tens of thousands of acres of so-called "jointless floors" have been laid down. The architect specifies them, but he does not know the ingredients; he is in the hands of the cheapest man, and if anything goes wrong, the architect's reputation is gone, if not worse. I think the Science Standing Committee might very well help the members in such matters as this. With regard to the Income and Expenditure Account, I see the Fire Insurance is £92, a very small figure if it covers the building and contents. It works out at about 2 per cent. on the valuation of the premises; and it is not clear whether it includes the Library. Concerning the advertisements in the JOURNAL, I have not last year's figures, but I think the income has gone up considerably, and I have always said the minimum for advertisement receipts should be not less than £1,000. With regard to subscriptions in arrears, "1921 and previously," I have asked the question on former occasions how far back this goes. I do not know why the information is kept back from members. We have a right to know the details of the £1,100 placed to our credit. If it refers to subscriptions in arrears, I think there is not more than a 100 to 1 chance of getting it back. Can we know how far back it applies?

Mr. ALAN MUNBY [F.]: I support Mr. Fraser in one of his remarks, namely, concerning research. I particularly plead with the Institute to take more, not less, interest in scientific research. What Mr. Fraser says is quite true; there is a vast number of materials (and they are growing in number every day) which need investigating. I am no longer a member of the Science Standing Committee, and therefore I have not now official responsibility in the matter, but there is a great deal of work called for in this direction, and we can obtain much help from other bodies, particularly from the Industrial Research Department, which has now as its head a gentleman who has had considerable experience in engineering and building. Mr. Weller is quite ready to be helpful. He is carrying out research as a Director of the Building Board, and I suggest that the Institute should keep in touch with his Department. The Science Committee has, from its inception in 1911, put a number of problems before it and we should continue to put before them the problems as money becomes available for the purpose. It would be the greatest mistake if we were to give the impression, as an Institute, that we were not prepared to uphold and encourage research on building materials in all possible aspects in connection with our architectural work.

Mr. F. HOOPER (F.): I would very much like to express appreciation of the record of the Councils' work and that of the constituent Committees during the past year. The Report shows

a surprising amount of activity. I rise particularly, however, to comment on a paragraph in the Practice Committee's Report, page 368, with regard to architects and speculative builders. Times are changing, and I think even the most pessimistic may be inclined to think that we have reached almost the bottom of the indifference in public appreciation of building, and that to-day a very large section of the public is vitally interested in the appearance of our country side, river side, and our streets. The work which is suggested opens up wide possibilities in a very desirable direction. I daresay there are many men in this room who have offered help in regard to schemes in hand; but those who have tried know that when they get to the definition of speculation, the control is *nil*. I commend to the Council the desirability of pushing on the Practice Committee's scheme.

Mr. MARTIN BRIGGS [F.]: There is one point in the Report of the Practice Committee, which is perhaps *sub judice*, but from the ranks I may be able to say something which some of us feel. Mention has been made of the services of architects, and many excellent books have been published by the American Institutes. We do not so much need a pamphlet on the services of architects as some alternative form of our Scale of Professional Charges, which is a rather terrifying document to send to a prospective client. If we could have something a little simpler, it would be very desirable. The present scale is all very well for the purpose of recovering fees in a court of law; it contains a good deal that does not apply to an ordinary commission and makes it far too long and complicated for convenient use in such cases. Perhaps the Practice Committee will consider the point when they are framing their pamphlet.

The Chairman of the Literature Committee will speak on behalf of its members as to the work done in respect to Library accommodation. For many years I have taken a small part in that, and I should like to say that the alleged apathy is by no means the fault of the Literature Committee, which has systematically sent up recommendations to the higher authority for a number of years.

Mr. T. R. MILBURN [F.], President of the Northern A.A.: There is only one thing I have to say, and that is, don't cut down the work of the JOURNAL. Do not forget that the JOURNAL is the greatest asset to the provincial members. London members have all the advantages of these rooms and the lectures, whereas those in the provinces have only the JOURNAL to tell them what is being done.

Mr. F. R. HIORNS [F.]: One can hardly emphasise too much the question of making proper provision for our Library. Some years ago, when I was a member of the Committee, the Library was suffering badly from lack of space, and a number of ideas were considered at that time in order to secure the required accommodation. I had hoped that the acquisition of No. 11 would possibly provide the means whereby we could extend the Library. We have, as Mr. Woodward said, one of the finest architectural libraries in the world, and it is obviously desirable that it should be properly accommodated, and that we should have a reasonable amount of space for expansion, such as is really necessary if we are going to acquire books from time to time and maintain the Library in its present excellence. I hope it may be possible for the matter to be reconsidered with the view of finding a solution of the problem, apart from the point mentioned by Mr. Woodward, the protection of the Library from fire. There is another point in the Literature Committee's Report to which I think reference should be made. I personally have taken a great pleasure in the public lectures which were arranged last session with the view of interesting the public in architectural matters. I think that is a very important thing, and very much to the credit of the Literature Committee and the Council, because it seems to me obvious we shall get no improvement in architecture, no extension of patronage on the part of the public, until they are enlightened as to what architecture is, and are able to discriminate between what is good and what is bad. It is a matter of congratulation

to find that these lectures are to be continued. I was very pleased that Mr. Woodward broke away from precedent to-night in his reference to Mr. Keen. The Institute owes very much to Mr. Keen, not only for the extraordinarily good judgment he always shows in dealing with matters concerning architecture in this Institute, but for the very great charm with which he does it. As to Mr. MacAlister, Mr. Dircks and the rest of the Staff, I am sure nothing too much has been said. I do not want, in Mr. MacAlister's presence, to say too much, but I think I can venture to say that in him we have an ideal Secretary for a learned Society such as ours. We can congratulate ourselves that that is so, and on the very excellent work which is done by the whole of the staff.

The CHAIRMAN: I will now call upon Mr. Walter Cave to speak on behalf of the Art Standing Committee and the Board of Architectural Education Art Committee.

Mr. WALTER CAVE [F.], Vice-Chairman, Board of Architectural Education: A question has been raised by Mr. Woodward to-night about the Board of Architectural Education. I may say on the matter of criticising designs which, with much regret, are turned down at times, that we now invite anyone who has had his design turned down to apply to us, and he will then be given a free criticism, and the reason for our action. There have been thirteen full meetings of the Board, and numerous smaller meetings of Committees in connection with it. We have been able to grant exemption from the Final Examination to the Glasgow School of Architecture, to London University, and Manchester University. We have also adopted, this year, a new system, a more careful and complete system in regard to the prizes for studentship designs. Committees have been carefully formed and the men who set the subjects are to be the judges. The scheme has been carefully organised. Now a few words about the Art Standing Committee, as the Chairman could not be here to-night. There have been eleven meetings, of which the attendances have been published. Various schemes have been carried out. We have arranged a series of visits to important buildings. We have seen the new County Hall at Westminster, the Whiteley Village and Somerset House. We are now arranging visits to Hampton Court, and St. George's Chapel, Windsor, and the Bush building in Kingsway. The Committee have done a good deal of work with regard to protecting and preserving ancient buildings. Every time an old building has been threatened, action has been taken, and much has been done to preserve it. The question of Cathedrals coming into the hands of the Office of Works has been before the Art Standing Committee; they are fully alive to the dangers, and they have taken every means to see that it shall not take place.

Mr. JOHN SLATER [F.] (Chairman of Practice Committee): I have been asked to say a few words about what I consider to be the maid-of-all-work of the Institute, the Practice Committee. Mr. Woodward has made reference to one or two points. He said he would like to hear something about the new Housing Committee. The Practice Committee had nothing to do with the inception of that idea; it was submitted to us by the Council, and Professor Adshead will be best able to answer questions as to the necessity the Council saw of forming this Committee. With reference to the remarks about the proposed pamphlet on the services of architects, we were told that in Canada and the States the Institutes of Architects published a Memorandum, which they send out broadcast, to enable the public to know the advantage of employing architects. It often happens that the people who build buildings do not see why they should go to an architect, and the idea was that the publication of such a pamphlet would enable the public to realise the benefit of doing so. That has something to do with the last clause, which was mentioned by another speaker. We know that speculative builders do not take the trouble to consult an architect. We found that some of the builders' associations were quite willing to discuss with us the desirability of an architect being employed by speculating builders. Nothing has

been done as yet; but if we can make the builders' associations understand that they will probably get better planned houses and higher rents by employing an architect much good will be done. I do not think any of you have cognisance of the multiplicity of matters which are sent to the Practice Committee. We get confessions from the sinner, lamentations from the bereaved, and strong representations from people who think they are wronged. Some members of the Institute seem to think of the Practice Committee as a *censor morum*, others as a board of arbitration, while others look upon us as a firm of solicitors from whom legal advice can be obtained without paying for it. On that last point I am disposed to put my foot down very strongly. It cannot be too clearly enunciated that the Practice Committee is not a body of solicitors, and that it is not competent to give legal advice. A large amount of our work we cannot explain or publish; we do good by stealth, and have no opportunity for blushing to find it fame. I wish to express my appreciation of the work done by the Practice Committee, by its sub-committees, and by its honorary secretary, Mr. Cubitt. We all owe him a debt of gratitude, the extent of which it is very difficult to estimate. The cases which are brought before the Committee are examined with the greatest care.

Professor ADSHEAD: The question has been raised why we should have a Committee on Housing. It hardly seems necessary to reply to such a question. You are all aware that housing has been a matter of very great importance, not only to architects but to the public generally, during the last three or four years, and I have always considered that the Institute has never been properly organised to deal with it. The Council has only to-day finally approved of the appointment of such a Committee. As to its duties, you are aware that previously to the war, and within the memory of living architects, the question of housing was left to the so-called speculative builder, by whom 95 per cent. of the houses were built. There was some change a few years before the war, when public utility societies employed architects and began to build houses and lay out residential areas on very much improved lines. I think the whole thing started with that wonderful scheme with which Norman Shaw's name was associated at Bedford Park. We are now beginning a new era. The war is over; we have our Ministry of Health and Housing, and there is a large number of houses still to be built. If ever there was a time it is the present to make an effort to capture some of the housing for architects. We shall not, perhaps, capture very much of it, but if we do not try we shall not capture any. Now is the time to look at the matter from every point of view and make an effort to get into the hands of architects the housing of the people.

Mr. H.W. BURROWS [A.], F.G.S., Chairman Science Standing Committee: I am sure we are all very much obliged to Mr. Woodward for his criticisms: they are well meant, and I think some of them are well founded. But some of them are ill founded. Mr. Woodward truly says that the main duty of an architect is, as a practical man, to be able to determine between the various materials he has to deal with, to tell the difference between the timbers, and to distinguish the different building stones. But that, unfortunately, is not as easy as it looks. Mr. Searles-Wood has lately published a very fine report on the various timbers with which architects may, or may not, have to deal. There is no way except the scientific one of telling the differences between these timbers. The name is no guide; the merchant calls deal and pine the same thing; trade terms are of no use. There may be a few architects who can tell the difference between the Whitbed Portland stone and Basebed Portland, but the microscope is the only reliable way. Even chemical analysis will not do it. I demonstrated, many years ago, that chemical analysis of stone is of very little assistance. Owing to the energy of the late Chairman of the Science Committee (Mr. Munby) we have had a very good piece of work done, with the assistance of the Geological Survey, showing the need for the

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examination of building stones. That is the work of the Science Standing Committee. It may lead in the right direction or it may be misdirected energy, but it has a purpose in view and good may come of it. I tried some time ago to discover why some of the pressed tiles which were made thirty years ago stood, while those recently made failed. I photographed many of them under the microscope, and I have studied others since. The old rule-of-thumb tests, which seemed to show what was a good and what a bad tile, fail us. I do not suggest that a man should carry a microscope on every job, but he should make careful experiments and inquiries before making up his mind as to the use of any material. Mr. Fraser has told us that a number of materials which have lately been introduced are in many cases used by architects without a knowledge of them, because many of them are trade secrets in regard to composition, and it is only by delving into those trade secrets and making chemical and other analyses and investigations that we shall be able to unravel those secrets; they certainly will not be given to us by other people. It can only be done by careful and minute research, and it is for that reason Mr. Munby and I welcome the assistance which is being given by the Research Board. We had a very interesting visit to the Acton Department, and we have had a great deal of assistance from Mr. Weller and his assistants. Mr. Woodward was justified in making the criticism that the number of attendances made by the various members of the Science Committee has not been published. The total number of meetings has been eleven, and some of us have attended every meeting. And we have had a good many meetings and visits in connection with the Acton Research Board and elsewhere which do not show on the agenda paper. As in the case of the Practice Committee, we find that many of the men in the Institute think that committees are instituted to give junior members—in some cases senior members—information which could very well be obtained by paying a fee outside. I take it that the work of a committee of this Institute, as for any other institute, is primarily for the benefit of the whole of the members, and not for specific cases, unless they have a general bearing. I am sorry to say that Mr. Franck, the Hon. Secretary of the Science Committee, had a very bad attack of pneumonia in the early part of this year, which laid him aside for some time. I did not belong to the Committee last year; my term of office had lapsed. Therefore the Report of the Science Committee is not as full as it might have been, mainly because of Mr. Franck's illness and my own deficiencies in filling up the hiatus.

Mr. PERKS [P.] (Chairman of the Finance Committee): With regard to the purchase of No. 11, we have practically the freehold—a perpetual lease subject to a ground rent of £18 a year. We gave £11,000 for it. We borrowed £10,000 at 6½ per cent., and paid £650 a year, and, as I say, we pay £18 a year ground rent. We have a balance of £332, so we are getting over 33 per cent. return for our money. We have let the property, but in seven years we can take possession of it, and I hope we shall then be in a position to pull it down and rebuild it as a fireproof building, with the view of extending the Library and of providing fireproof rooms for library storage. We can easily make openings in the party wall and have a fireproof building without interfering with the old Library, for we should all be sorry to interfere with it. With regard to the piece of land immediately at the side of the large gallery, which has been bought for £3,000, our Hon. Secretary will get out drawings for extending this gallery, and I think it will mean something like doubling the area. We have bought it at a reasonable price, the price of back land in Maddox Street, but now it is back land in Conduit Street, which is worth double. Therefore I think we have done a fairly good piece of business, and I hope we shall be able to get on with the work this autumn, because the mortgages are being consolidated, and I think we shall have enough money to build. Mr. Keen is considering it in regard to further accommodation, and there will be a conference between Mr. Keen and repre-

sentatives of the Library Committee. With regard to the balance sheet, I will only mention one or two items. The payment to retiring officials, £750, we hope will not recur for some time. The printing we have looked into carefully, and the estimate for next year is less. We hope the price of printing and of paper will come down. "Structural alterations and general repairs £900." The old Council room was altered in different parts and the office has been re-arranged, and I think everybody likes the re-arrangement very much. We are much indebted to Mr. Keen for carrying this out. With regard to the JOURNAL, the price has gone up, but the estimate for next year is less. That has been gone into. But there is no idea of cutting the JOURNAL down. Miscellaneous expenses: *The Designers of Our Buildings*, £204. The author did it for nothing as a gift to the Royal Institute; £204 was spent by us in printing and binding the book. With regard to the garden party, there was a balance over from the previous year, and I do not think it is proposed to hold one again. There was a balance last year, and it was a very good advertisement. "The Office of Works Committee, £113 10s." That was a legacy, and it is done with. These were expenses incurred by the previous Council. Subscriptions have been raised. Examination fees have gone up from £2,600 to £3,462, and that is a very important item in our income; and I hope nobody here will let anybody who is not a member of the Institute have any idea that he can get in without passing an examination—I speak simply on the matter of finance. Mr. Fraser mentioned the subscriptions in arrears for 1921, and previously, were £1,100. Men fall into arrears with their subscriptions, and we try to get the money. Each case is gone into separately. Times have, as you know, not been very good for architects. With regard to expenditure generally, I mentioned one thing last year, and it is this. As subscriptions are paid by members, the first idea in spending the money ought to be to spend it on something to benefit the men who give it; they ought to be the very first men to be considered. We want to improve our premises, to improve our JOURNAL, to promote some scheme to bring us more into touch with the allied societies in the provinces, and perhaps send large collections of books down and other things which we might think of, to give the provincial men a little more for their money. As our friend has just said, they only get the JOURNAL. Generally, it is a mistake to give away money, no matter how good the object, while we are in want of money ourselves. We have a big mortgage, and we have to save money to start rebuilding No. 11 in seven years' time. We are inundated on the Council with excellent appeals, connected principally with education. It is very nice to make grants, but we are giving away members' subscriptions in schemes of education which perhaps they are not interested in. When we have done our best for ourselves; cleared off our debt, built the proposed adjoining gallery, rebuilt No. 11, and spent a few thousands of pounds in the Library, we may be able to talk about giving money away. We should not give money away while we have a Library that needs it. We should be just to our own members before we start being generous to others. In this connection selfishness is a virtue.

Mr. ALAN SLATER [A.] (Joint Hon. Secretary Literature Committee): Mr. Fletcher, the Chairman of the Literature Standing Committee, is in France; I have been asked to take his place. I hoped the report of the Literature Standing Committee would be non-controversial, and I think it is; but there have been one or two remarks made about the report which I might answer. Mr. Briggs has referred to the accommodation in the library. I do not think the Committee can be accused of apathy. Ever since I have been a member of the Committee we have had a Sub-committee at work on the accommodation of the library, and it is continually meeting and forwarding recommendations to the Council on the subject. Mr. Fletcher, at very great pains, prepared a scheme for bringing the library down into the lower galleries. It was felt that the large gallery was not an ideal meeting-room, and that many members

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would like to go back to the old meeting-room on the first floor. We submitted a scheme to the Council whereby the large gallery should be the reference library, the last gallery also to be for the reference library divided into three parts, allowing a department for special study, and the common room to be used for the loan library. That was turned down by the Council, and we were informed that the matter had to be postponed, because we were probably acquiring more land at No. 10, Conduit Street. We were somewhat disappointed that there was no benefit, so far as the library was concerned, from the acquisition of the land, and that is explained in this report. We have now bought further land in Maddox Street, and, as Mr. Perks has told you, representatives of the Literature Committee are meeting the Officers of the Institute in connection with the possible use of this land for the library. Mr. Perks has said—and I have heard it for the first time to-night—that after the seven years' lease of No. 10, Conduit Street there may be hopes that the library will be better accommodated. We must hope that during the interval nothing disastrous will happen. We feel we are in a dangerous situation, and from what has been said to-night I think it is the opinion of the Institute that we are. Mr. P. M. Fraser has suggested various recommendations for the safer housing of the books, which include the installation of sprinklers. It was considered by the Committee, but it was felt that unless the scheme was carried out over the whole building it would not be likely to be effective. It was also felt that the installation of sprinklers in the beautiful ceiling of the library would look very unsightly. I hope there will be no idea in the future that the Literature Committee are not aware that the library is in an unsafe condition. Mr. Hiorns expressed satisfaction that we are continuing the public lectures this year. I am glad to say we shall have five lectures, which are to start this month, and will be carried on through June.

The CHAIRMAN: Will Mr. Davidge speak on town planning?

Mr. W. R. DAVIDGE [F.]: In the absence of Sir Aston Webb, it falls to me to say a word. I am glad Mr. Woodward spared the Town Planning Committee; but he did touch on housing. Mr. Adshesh has told you that housing in future will be dealt with by a separate committee, and it will be very much better dealt with than it has been in the past. Town planning will become compulsory before the next Annual Meeting of this Institute. On and after June 1st all towns which have 20,000 people at that date will have to prepare a town planning scheme. And the Town Planning Committee are anxious that members of the Institute should get the work. We are very anxious that our provincial members should be alive to the opportunities before them. If they will keep in touch with the Institute, the Institute will do their best to help them to get their share of the work. There is one thing the Town Planning Committee does which older committees have not the opportunity of doing: we keep more or less in touch with many activities. I wish to express my great admiration not only for the Officers of the Institute, but all those who are keeping the older committees going. Also for Mr. Perks, for the immensely valuable work he has done in improving the finances of the Institute. The Institute has never been in a better position, and that is largely due to the self-denying labours of the Officers of the Institute, and the Chairman of the Finance Committee.

Mr. HENRY V. ASHLEY [F.]: I have to express the regret of the Chairman, Mr. W. G. Wilson, who is unable to be present to-night owing to illness, and for the absence of my colleague Mr. Herbert Welch, the Hon. Secretary. I take it that the work of the Competitions Committee is entirely non-controversial. There has been no question asked about its work, and the only comment which has been made was a kindly one by Mr. Woodward. But our chief work is to assist promoters in every way possible in the promotion of competitions, and to protect the members of this Institute when they propose to take

part in them. There is one point to which I would like to draw the attention of members, and that is to the Joint Sub-Committee which is now sitting to deal with the whole question of the regulations of architectural competitions. If members have any suggestion to make with regard to any regulation, the Competitions Committee will be only too glad to receive it.

The CHAIRMAN: Mr. MacAlister will answer one or two questions.

Mr. MACALISTER (Secretary): There were two omissions from the Obituary List—those which have been alluded to. Those deaths occurred after the report had been printed. With regard to the publication of attendance, under the By-laws the attendances at the Council and the Standing Committees have to be presented to the meeting to-night. They are published in the JOURNAL which goes out before the voting papers are issued. Mr. Fraser raised a point about the By-laws. At the meeting on February 7th the Chairman ruled that the By-law requiring a two-thirds majority applied to that resolution; it was the ruling of the Chairman at the meeting, and the Chairman is the authority. It is not the case that the announcement was not made until several weeks afterwards; the announcement was made by the Chairman before the meeting ended, and it was conveyed to the members still present in the room and to the Press. We took steps to inform everybody within reach. With regard to advertisements, the figure we are getting next year is a minimum of £1,250; we have a new contract.

MR. ROBERT ARDLEY.

Most people who are acquainted with the interior of the President's office are familiar with the personality of Mr. Robert Ardley and will therefore take a sympathetic interest in an event which is of supreme significance to Mr. Waterhouse's family and his staff. Mr. Ardley has completed 50 years of continuous and faithful service in the same employ and has thus been the valued assistant of three generations of employers.

Beginning his connection with this old established office at an early age he is still, it may be hoped, far from any diminution of his powers and faculties.

Probably it has never been the lot of anyone to be the trusted and confidential aid of two Presidents of the R.I.B.A., and few, if any, can have equalled Mr. Ardley's record of devoted activity under father, son, and grandson.

An evening of celebration was observed on May 9, during which a presentation and a dinner were followed by an entertainment. Mr. Paul Waterhouse, Mr. Michael Waterhouse, and the whole of the present staff took part.

LEEDS AND WEST YORKSHIRE ARCHITECTURAL SOCIETY COMPETITIONS AND AWARDS, 1922.

The Leeds and West Yorkshire Architectural Society have published a pamphlet giving particulars of the Society's Competitions and Awards for 1922. These include prizes for measured drawings, for sketching, for design, architectural history (to be awarded for the best set of notebooks, drawings or other evidences of study compiled either in classes or private study), and prize essay, of which the subject is "The Yorkshire Manor House, its Development and Features."

Unification and Registration

The following is an expression of the view of a minority of Members of the Unification and Registration Committee on the statement on Unification issued by that Committee :

We are strongly in favour of Unification but submit that the scheme suggested by the majority of members of the Committee is not one that is likely to obtain it. Fundamentally it is entirely an optional scheme, under which men outside the Institute are to be allowed to join without passing any examination, and subject only to the approval of our Council, to a joint Committee of the R.I.B.A. and the Society of Architects, or to some other tribunal to be appointed. But, as under the scheme, there must be Architects who are either rejected or who do not desire to join the Institute, there can be no unification of the profession, and it is obvious that the only way to obtain it is by a Registration Act giving legal power for its enforcement.

It was urged at the last meeting that the Associate Members of the R.I.B.A. strongly resent any admittance to their class without examination. However, as the Unification Committee, although asked to do so, would not insert in their statement a clause relative to any test, it will be possible, under their proposals, for an indefinite number of men to become Associates of the Royal Institute of British Architects without passing any examination. This wilful omission of a saving clause clearly indicates that the majority of the Committee is in favour of admitting unexamined men to that class, although the proposal is entirely contrary to the views expressed by many of our Associate Members. We trust Associates will strongly oppose the scheme, not only on that account, but for other reasons mentioned in this Report.

There are over 2,000 men in the allied societies who are not members of the R.I.B.A., and it is absurd to suggest that they should be admitted to the Institute with a view to the unification of the profession, for, at the present time, these societies elect representatives to the Council of the R.I.B.A.

Unattached architects are bound to exist, and, apart from them, the Institute can now claim to represent every architectural society in England, except the Society of Architects. As, however, this society was founded, primarily, with the view of obtaining registration, it could not consistently oppose the principle of any Registration Bill, and, although it might object to details, doubtless agreement would ultimately be brought about. Consequently, we submit that, apart from unattached architects, a united profession could at once approach Parliament with a view to obtaining registration. We fail to see why Members of the Society of Architects and our allied societies should be allowed to enter the Institute without passing the statutory examinations. The Architectural Association is practically allied to the Institute, and the Official Architects' Association is desirous of working with the Institute in every way. For these and other reasons we consider that the Committee's scheme of Unification is absolutely unnecessary, and we also regard the proposal to throw open the coveted membership of the Institute to all and sundry without the test of a professional examination is fraught with great danger to the future welfare of the R.I.B.A. During the

final deliberations of the Committee efforts were made—but unfortunately without avail—to elicit a plain statement of the intentions implied by the term "grouping into an organic whole within the Royal Institute of British Architects" of Architects "properly so called." In our view, it is deplorable that a policy expressed so ambiguously should be promulgated.

It will be seen at once that acceptance of the Committee's policy involves an entire change in the character of the R.I.B.A. as now constituted, and Members are reminded that the present value of the Royal Institute to Architects results from its having stood, from the time of its foundation, for what is best in Architecture and that it has appealed to and gained the adherence of its Members precisely for the reason that it has required and maintained a high standard of architectural qualification from those connected with it. But for this, it is obvious that the worthy men within its ranks who have brought credit to Architecture and developed a high standard of professional ethics would not have entered its portals. We are now asked, under the Unification policy proposed by the Committee, to go back on these conditions and to accept the principle of admitting men into the Institute on a footing never before contemplated, and in a manner that, as it appears to us, must inevitably result in changing materially the whole standard of value upon which, hitherto, the Royal Institute has been judged.

Apart from rare exceptions, made in the case of architects of distinction, membership of the R.I.B.A. is now only obtainable by those who can satisfy the increasingly high standard of qualification required by the Examination Board. But under the Committee's proposals these salutary restrictions must, obviously, be set aside, as it is clear that students will not work for and undergo difficult and costly examinations when they realise that others may be admitted by means that demand little or no sacrifice.

In the terms of the document to which we refer, Unification is said to be desirable, *inter alia*, because the "Institute, so constituted, would become numerically larger than any existing bodies, and thereby proportionately more influential." We consider this principle to be entirely false, as that which makes a learned body influential, and causes it to command public respect, is *not* the number of its members, but the *nature of the qualifications required for its membership*.

Again, whilst, as set forth in the statement, it is no doubt quite true that some of the now unattached architects and others "will not decline the advantages which inclusion (in the Institute) will obviously offer," it is, in our opinion, outrageous to claim that such admissions "will not derogate from the prestige and interest of those existing members whose membership of the R.I.B.A. is based on qualification by examination or other test."

Moreover, the Institute, regarding its representation of architecture and its control of architects in this country, is already, many times over, numerically larger than any other architectural society as at present constituted, and the recognition given to the value of its membership, is adding to its numbers at an increasingly rapid rate. There is, in fact, every reason to suppose that if the present basis of the Institute is consistently preserved it will represent, before long, all that need be seriously considered in

matters architectural. It is because we think this, and moreover because we consider that the great body of the Institute Members will adopt the same view when they realise the vital importance of the principle now imperilled, that we express our most emphatic disagreement with the sequence under which the "Unification" policy, so-called, is to be carried out. To suggest that "Unification," which involves combination with architects who do not, necessarily, hold similar views either upon architecture or ethics with those now adopted by the Institute would assist Registration is, in our opinion, another entirely incorrect assumption. We see no reason whatever why the Institute should not proceed at once with the promotion of a Bill for the statutory registration of Architects, and thereby ascertain, in a practical way, whether Registration is, in fact, obtainable.

As the only body of architects existing in this country that has the slightest chance of promoting a Registration Bill with any success, it is difficult to understand why the Institute, representing as it does, with comparatively few exceptions, all the reputable architects of the country, should hesitate to adopt a policy for the benefit of the whole profession which it, and it alone, has any chance of carrying through with success.

Finally, without absorbing time in the useless discussion of details attached to a principle we believe to be entirely wrong, and altogether disastrous to the future success of the R.I.B.A., we beg to record our emphatic disagreement with the Unification Committee's proposals, and we hereby recommend as an alternative policy that steps be taken forthwith by the Institute to promote a Bill for the Statutory Registration of Architects, and in the meantime to preserve its membership on the present basis.

Incidentally we recommend also that measures be adopted to secure for the Associate Members of the R.I.B.A. the full voting powers, hitherto enjoyed solely by the Fellows, and thus enable our younger members to participate in the affairs of the Institute to an extent to which they are entitled.

Mr. C. B. Flockton, of Sheffield, has written to the Unification and Registration Committee to express his disagreement with its statement on Unification, but as he was unable to be present at the last meeting we have not asked him to sign this minority Report.

ALFRED W. S. CROSS,	<i>Vice-President</i> , R.I.B.A.
SYDNEY PERKS	} Members of the Unification and Registration Committee.
W. E. RILEY	
DIGBY SOLOMON	

BOARD OF ARCHITECTURAL EDUCATION.

R.I.B.A. INTERMEDIATE EXAMINATION.

The centres for this examination, which will be held from 9 to 15 June, will be London and Birmingham.

EVERARD J. HAYNES,
Secretary to the Board.

CENTENARY OF THE ROYAL ACADEMY OF BELGIUM.

The Royal Academy of Belgium has presented to the Institute the Bronze Medal struck on the occasion of the celebration of the hundredth anniversary of its foundation.

Architects' Benevolent Society

The Annual General Meeting of the Architects' Benevolent Society was held in the rooms of the Institute on the 10 May. The President, Mr. Paul Waterhouse, was in the chair, and amongst those present were Sir Charles Nicholson, Bart., Hon. Secretary; Mr. W. Hilton Nash, Hon. Treasurer; Mr. Wm. Woodward; Mr. Henry Lovegrove; Mr. Herbert Shepherd; Mr. Saxon Snell; Mr. Henry M. Fletcher; Mr. Ivor Lewis; Mr. Albert E. Kingwell; Mr. C. C. Bradley; Mr. W. Vernon Crompton; Mr. Wm. Grellier, and Miss E. H. Mann, M.A. (Assist. Secretary).

The President, in moving adoption of the Report, said:

It is very pleasant to me to realise, as others have realised before me, that the Presidentship of the Institute carries with it the temporary captaincy of this amiable brotherhood which we call the Architects' Benevolent Society. I confess that it is with a measure of dismay that in moving the adoption of the report I have to reveal the success which has attended the efforts of my predecessors. You will see that we have doubled our list of annual subscribers and doubled the aggregate of their contributions. Believe me, such a condition of affairs, if full of hope, is full, also, of menace and of warning. It looks suspiciously like a spurt, and what we are in for is a long-distance race. The strength of our Society can, it is true, be measured in pounds, shillings and pence, but what we want, if I may say anything so paradoxical, is givers even more than gifts. I should like to see our printing expenses swollen by an increase of the number of pages devoted to subscribers' names. The satisfaction which comes to the smallest subscriber from realising that his trifle—or, better still, his munificence—is flowing along in a flood of other trifles—or munificences—is far greater than that of the non-subscriber who reads that his generous neighbour has given or bequeathed a hundred or a thousand pounds. Further, I think that even our recipients feel a warmer courage when receiving our gifts when they realise that the helping hand that comes to their aid is the hand of the multitude of their brethren. Let us go on and enlarge by all possible powers of persuasion the number of those who join with us in this society of sympathy.

And to those who have gratitude to express and the means to express it, let me add that a donation of 20 guineas does mean more or less a guinea a year in perpetuity, and that the price of first-class securities is rising rapidly.

If donors are out for economy, let them "do it now." You will see in the report many points of interest. There is an allusion to the administration of the moneys granted by the Prince of Wales Fund which has been carried on under the able chairmanship of Mr. Seales-Wood, and which is, of course, independent of the general work of our Society, though entrusted to us. There is also a hint as to the consideration of a scheme for providing a Home for aged applicants, to which at present we are only able to wish success, but which may in time work out into a valuable feature.

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Unhappily, we have, as usual, to record losses by death, and among these we recall perhaps specially the names of Mr. Rournieu, our vice-President, and Mr. Ernest Newton, R.A., whose spirit of friendship towards all his brother architects was typical of the spirit which our Society tries to inculcate and encourage.

The Council for the ensuing year of office was elected as follows :—

President : The President of the R.I.B.A. *Ordinary Members* : Mr. W. Henry White, Mr. William Woodward, Mr. Maurice E. Webb, Mr. Henry M. Fletcher, Mr. H. D. Searles-Wood, Mr. Dendy Watney, Mr. Henry Lovegrove, Mr. Thomas E. Colclutt, Mr. Lewis Solomon, Mr. Percy B. Tubbs, Mr. Arthur Sykes, Mr. William Grellier, Mr. R. Dircks, Mr. E. J. Sadgrove (representing the Society of Architects), Mr. W. G. Newton (representing the Architectural Association).

A vote of thanks was passed to Mr. W. Hilton Nash, Hon. Treasurer, and to Sir Charles Nicholson, Bart., Hon. Secretary, who were both re-elected in their respective offices.

ARCHITECTS' CHARGES.

In reply to a recent letter on the question of architects' charges, Mr. Arthur Keen (hon. secretary) wrote to *The Times* as follows :—

The charge of 5 per cent. on the cost of the building had been in operation for generations past, although building had become immensely more complex, and although the responsibility of the architect had increased in similar measure.

It is clear that a modern building, with its fireproof construction, complex foundations, heating arrangements, lifts, steelwork and elaborate decorations, to say nothing of building Acts, water and drainage regulations, bills of quantities, and other things that affect the matter, involves a very great increase in the architect's work, and in his office expenses. This is met in great measure by the cost of these things increasing the amount of the fee, but this increase is not in due proportion to the work.

An extremely good illustration of the change that has come about in buildings was given in a Paper read at the Institute recently on the London clubs; the planning and construction of the club house of 50 to 100 years ago was seen to be mere child's play in comparison with that of a modern example such as the Automobile Club. There is, of course, a great difference in complexity between City buildings and domestic work generally, but the proportion is pretty well maintained.

The increase from 5 to 6 per cent. in the charge for architectural work was adopted before the war, but was held over until 1919.

ARCHITECTS' AND SURVEYORS' ASSISTANTS' PROFESSIONAL UNION.

Subject to ratification by the Branch Committees, the Executive Council of the Architects' and Surveyors' Assistants' Professional Union has appointed Mr. John Mitchell, Junr., as full time General and Organising Secretary of the Union.

Mr. Mitchell, who is a measurer (quantity surveyor), has for the past two years acted as Honorary Divisional Secretary for Scotland, and has been largely instrumental in establishing the Union so firmly there.

A NEW HOUSING COMMITTEE.

The Council of the Institute have adopted a recommendation from the Practice Standing Committee and the Town Planning and Housing Committee in favour of establishing a new Housing Committee, consisting of four members of the Practice Standing Committee, six members of the Town Planning and Housing Committee, six representatives of the Allied Societies, and additional members appointed by the Council, for the purpose of dealing with all questions affecting the subject of housing.

BUILDING BY-LAWS.

It has been decided by the Council of the Institute to appoint a deputation from the Royal Institute to urge the Minister of Health to extend for a further period of twelve months the relaxation of Building By-Laws under Section 25 of the Housing, Town Planning, etc., Act of 1919.

REFORM OF THE LONDON BUILDING ACTS.

The Council of the Institute have decided to form a special committee to consider the revision and co-ordination of the London Building Acts.

SUSPENSION OF MEMBER.

A member of the Institute has been suspended for twelve months for taking part in a competition the conditions of which were not in accordance with the R.I.B.A. Regulations.

UNIFICATION AND REGISTRATION COMMITTEE.

On the nomination of the Society of Architects, Mr. A. J. Taylor, of Bath, has been appointed to serve on this Committee.

KENWOOD PRESERVATION COUNCIL.

Mr. Alan E. Munby has been appointed to represent the Royal Institute on the Kenwood Preservation Council.

SILICOSIS AMONGST STONEMASONS.

The Council have adopted and transmitted to the Building Trades Parliament a report from the Science Standing Committee on the subject of Silicosis amongst Stonemasons.

THE ABUSES OF ADVERTISEMENT.

The Council of the Institute have decided to join the "Scapa" Society (Society for Checking the Abuses of Public Advertising) in supporting Lord Newton's Bill for amending the Advertisements Regulation Act of 1907.

Conference at Cardiff

Conference of the Royal Institute of British Architects and its Allied Societies (in conjunction with the South Wales Institute of Architects), Cardiff, 8, 9 and 10 June 1922.

President: MR. PAUL WATERHOUSE, P.R.I.B.A.

PROGRAMME.

THURSDAY, 8 JUNE.

8.30 p.m.—Reception by the Lord Mayor of Cardiff (Councillor F. H. Turnbull) at the City Hall. An Exhibition of prints and photographs of Cardiff, old and new, will be on view.

FRIDAY, 9 JUNE.

10.30 to 11.30 a.m.—Paper by Major Harry Barnes, M.P., F.R.I.B.A., on "Unification and Registration."

11.45 a.m. to 1 p.m.—Visit to City Hall and Law Courts, Cathays Park.

2.30 to 5 p.m.—Visits to Welsh National Museum and Glamorgan County Hall. Tea in the Museum, by kind invitation of Alderman Treharne James, Chairman of the Management Committee.

7 for 7.30 p.m.—Banquet at the Park Hotel.

SATURDAY, 10 JUNE.

10 to 11.15 a.m.—Paper by Mr. Herbert T. Buckland, F.R.I.B.A., on "Civic Architecture and Advisory Art Committees."

11.15 a.m. to 1.30 p.m.—Paper by Mr. Percy Thomas, O.B.E., F.R.I.B.A., President of the South Wales Institute of Architects, on "Problems of Practice."

2 to 6 p.m.—Visit to Cardiff Castle and Grounds.

4 p.m.—Tea in the Banqueting Hall, by the kind invitation of the Marquis of Bute.

8 p.m.—Smoking Concert, by the invitation of the South Wales Institute of Architects.

SUNDAY, 11 JUNE.

10.15 a.m. to 7.15 p.m.—Char-a-banc tour to Tintern Abbey and the Wye Valley, for those Members who stay in Cardiff over the week-end.

All Members, Licentiates and Students of the R.I.B.A., Members of the A.A., and Members of the Allied Societies are invited to attend the Conference. It is hoped that all those whose engagements permit will take this opportunity of becoming better acquainted with their colleagues throughout the country and of enjoying the admirable and varied programme which has been arranged by the South Wales Institute of Architects, with the assistance of the Marquis of Bute, the Lord Mayor of Cardiff, and others. *Members intending to be present are requested to send their names as soon as possible to the Secretary, R.I.B.A., 9, Conduit Street, W.1., when fuller particulars will be sent to them.*

Competitions

R.I.B.A. COLOUR COMPETITION.

The Assessors have made their award in this Competition and report to the President of the Institute as follows:—

We, the Assessors, have carefully considered the 170 designs sent in for the above Competition, and make the following awards:—

1st prize of £100 to design	No. 147.
2nd " £50 "	No. 93.
3rd " £20 "	No. 130.
4th " £30 "	No. 78.

We consider that the drawings sent in represent a very gallant attempt at a solution of the problem set, and we should like to make an honourable mention of the following designs:—No. 32, No. 61, No. 84, No. 86, No. 90, No. 120, No. 146, No. 158.

We are, Sir,

Your obedient servants,
THOS. E. COLLCUTT.
HALSEY RICARDO.
GERALD MOIRA.

Owing to absence from town Sir Edwin Lutyens was, we regret, unable to take part in the award.

The names of the competitors who have been awarded premiums or received "honourable mention" are given below:—

AWARDED FIRST PREMIUM.—£100.

No. 147. Mr. Arthur E. Pearce, 8, Herondale Avenue, Wandsworth Common, S.W.18.

AWARDED SECOND PREMIUM.—£50.

No. 93. Mr. John S. Lee, A.R.I.B.A., 2, Bedford Square, W.C.1.

AWARDED THIRD PREMIUM.—£20.

No. 130. Mr. G. L. Owen, Dockmasters House, King George Dock, Hull.

AWARDED FOURTH PREMIUM.—£30.

No. 78. Messrs. H. S. Fleming, A.R.I.B.A., and W. J. Kieffer, 83, Pall Mall, S.W.1.

HONOURABLE MENTION.

No. 32. Mr. Elfric H. Smith, 82, Broomwood Road, Clapham Common, S.W.11.

No. 61. Mr. Frederick Barber, "Carisbrooke," Marlborough Road, South Woodford.

No. 84. Mr. Harry Simeon, 83, West Side, Clapham Common, S.W.4.

No. 86. Mr. H. F. Billimoria, School of Architecture, University of Liverpool.

No. 90. Mr. H. F. T. Cooper, The Two Gables, Box Ridge Avenue, Purley, Surrey.

No. 120. Mr. Hugh Mackintosh, 1, Imperial Buildings, East Croydon.

No. 146. Mr. W. J. Palmer Jones, 11, Buckingham Street Adelphi, W.C.2.

No. 158. Mr. Frederick J. Horth, A.R.I.B.A., 19, Albany Street, Hull.

COMPETITIONS OPEN.

Auckland War Memorial.

Ipswich War Memorial.

The conditions and other documents relating to the above competitions may be consulted in the Library.

Candidates for Election at the Business Meeting

12 June, 1922

An election of Candidates for Membership will take place at the Business General Meeting on 12 June. The names and addresses of the candidates (with the names of the respective proposers) found by the Council to be eligible and qualified for membership according to the Charter and By-laws, and recommended by them for election, are appended:—

AS FELLOWS (10).

- ANDERSON: ANDREW WHITFORD [A. 1884], 28 High Street, Watford; 18 Wellington Road, Watford. Proposed by Norman T. Myers, John C. T. Murray, Percy S. Worthington.
- BRADDELL: THOMAS ARTHUR DARCY [A. 1920], 13 Old Quebec Street, Marble Arch, W.; 8 Lansdowne Road, W.11. Proposed by Oswald P. Milne, Sydney Perks, Sir Banister Fletcher.
- BROWN: WILLIAM EDWARD ARTHUR [A. 1904], 9 Regent Street, S.W.1; 69 Ross Road, Wallington, Surrey. Proposed by George A. Lansdown, Bernard Dicksee, Sydney K. Greenslade.
- CROMIE: ROBERT [A. 1914], 8 Gloucester Mansions, Cambridge Circus, W.; 21 Adelaide Road, Surbiton. Proposed by W. H. Hobday, W. E. Riley and the Council.
- CURTIS: WILLIAM THOMAS [A. 1904], Guildhall, Westminster, S.W.; "Linkwood," Link Lane, Wallington, Surrey. Proposed by H. G. Crothall, W. E. Riley, Sydney Perks.
- MOLE: CHARLES JOHNS, M.B.E. [A. 1909], H.M. Office of Works, Westminster, S.W.1; "Glenlyn," Bowes Road, Walton-on-Thames. Proposed by Alfred Cox, David Thomson, R. W. Collier.
- OWEN: GEOFFREY [A. 1912], Palmyra Square Chambers, Warrington; Myddleton Hall, near Warrington. Proposed by W. Curtis Green, S. Percy Silcock, Segar Owen.
- RIDDEY: CHARLES [A. 1898], Gold Street Chambers, Kettering; "Stoneleigh," Queensberry Road, Kettering. Proposed by W. Talbot Brown, J. W. Fisher, J. A. Gotch.
- RUDDLE: ALAN WILFRID [A. 1909], 6 Long Causeway, Peterborough; Boroughbury, Peterborough. Proposed by the Council.
- SOUSTIER: ERNEST GEORGE WILLIAM [A. 1905], 3 St. James's Street, S.W.1; Strafford House, Crescent Gardens, Wimbledon Park, S.W. Proposed by A. S. R. Ley, Sydney Tatchell, Stanley J. May.

AS ASSOCIATES (24).

- ALWARD: WILLIAM WALLACE, M.Arch. [Special War Examination], c/o Messrs. Nobbs & Hyde, 14 Phillips Square, Montreal, Canada; 127 Drummond Street, Montreal, Canada. Proposed by Professor Percy E. Nobbs, Professor Ramsay Traquair, William Carless.
- ANDREWS: CYRIL DOUGLAS [Special War Examination], 222 High Street, Ponders End, Middlesex. Proposed by T. P. Bennett, W. Ernest Hazell, Ralph Knott.
- BEAUMONT: JOHN SOMERVILLE, M.C., B.A. [S. 1921—Special War Exemption], 24 Brazenose Street, Manchester; 4 Wellington Crescent, Upper Chorlton Road, Manchester. Proposed by Arthur W. Hennings, Isaac Taylor, J. W. Beaumont.
- CHEEK: ALFRED CYRIL [Special War Examination], c/o Messrs. Seale & Riley, 25 Horsefair Street, Leicester; 98 Howard Road, Clarendon Park, Leicester. Proposed by Arthur H. Hind, Howard H. Thomson, William M. Cowdell.
- CLARK: HAROLD GOUNDRY [Special War Examination], Feethams, Darlington; Summerhill, Abbey Road, Darlington. Proposed by F. Clark, Arthur Stratton, W. J. Moscrop.
- DAVIES: HAROLD HINCULIFFE [Special War Examination], 14 North John Street, Liverpool; 20 Eighth Avenue, Stoneycroft, Liverpool. Proposed by T. Taliesin Rees, T. F. Shephard, Professor C. H. Reilly.
- DAWSON: HARVEY ALEXANDER [Special War Examination], c/o Bank of Montreal, 9 Waterloo Place, S.W.1. Proposed by Maurice E. Webb, T. Brammall Daniel, Septimus Warwick.
- HARRILD: FRED, M.A.Oxon [Special War Examination], 57A High Street, Totnes, S. Devon. Proposed by Henry Tanner, Sir Henry Tanner, Thomas B. Whimney.
- HAYWARD: JOHN HAROLD [Special War Examination], 60 Grant Street, Glasgow. Proposed by Professor Charles Gourlay, John Stewart, Geo. And. Paterson.
- JACKSON: HAROLD THOMAS [Special War Examination], Bush House, Aldwych, W.C.2; 15 Petherton Road, Highbury, N.5. Proposed by L. W. Barnard, Sir Banister Fletcher, Professor A. E. Richardson.
- JENKINS: THOMAS TREVELYAN [S. 1922—Special War Exemption], 18A Baliol Chambers, Stanley Street, Liverpool; 6 Tennyson Street, Princes Park, Liverpool. Proposed by Professor C. H. Reilly, T. F. Shephard and the Council.
- LAY: ARTHUR PURCELL [Special War Examination], 149 Upper Richmond Road, Putney, S.W.15. Proposed by C. H. B. Quennell, H. P. Burke Downing, E. Stanley Hall.
- PRYNNE: HAROLD FELLOWES [S. 1921—Special War Exemption], P.W.D. Secretariat, Chepauk, Madras, India. Proposed by Geo. H. Fellowes Prynne, Sir Aston Webb, Hugh P. G. Maule.
- REEVES: JOHN EDWARD [Special War Examination], 158 Waterloo Road, Smethwick, Birmingham. Proposed by W. H. Bidlake and the Council.
- ROBERTSON: ALEXANDER SMEATON [Special War Examination], Department of Works and Railways, Treasury Place, Melbourne, Australia. Proposed by Rodney H. Alsop and the Council.
- SADLER: WILLIAM [Special War Examination], 41 Thornhill Road, N.1. Proposed by T. P. Bennett, Arthur J. Davis, Chas. H. Gage.
- SAMPLE: EDMUND FREDRICK RONALD [Special War Examination], c/o Messrs. Denison, Ran & Gibbs, Beaconsfield Arcade, Hong Kong, China. Proposed by Walter H. Brierley, Arthur Pollard, Chas. H. Channon.
- SEATON: WILLIAM GEORGE [Special War Examination], 22 Mackintosh Road, Pontypridd, Glam. Proposed by Harry Teather, Cecil Wilson and the Council.
- THOMPSON: CHRISTOPHER CRAIG [Special War Examination], 24 Crescent Road, Toronto, Canada. Proposed by F. S. Baker and the Council.
- THREADGOLD: ROBERT AINSLIE [S. 1914—Special War Exemption], 107 Hall Lane, Liverpool, E. Proposed by Professor C. H. Reilly, Gilbert Fraser, Hastwell Grayson.
- TOWNSEND: ARTHUR CECIL [Special War Examination], 7 Rawlins Street, Fairfield, Liverpool. Proposed by Professor C. H. Reilly, T. Taliesin Rees and the Council.
- VON BERG: WILFRED CLEMENT, M.C. [Special War Examination], Imperial War Graves Commission, St. Omer, France. Proposed by Robert Atkinson, Sir Reginald Blomfield, Charles Holden.
- WHITLEY: CUTHBERT CLAUDE MORTIER [Special Examination], 37 Harold Street, Hawthorn, Victoria, Australia. Proposed by Rodney H. Alsop and the Council.
- WILLMAN: JOHN HENRY [Special War Examination], 65 Greenway Avenue, Taunton. Proposed by F. W. Roberts and the Council.

JOURNAL OF THE ROYAL INSTITUTE OF BRITISH ARCHITECTS

AS HONORARY ASSOCIATES (10).

PROPOSED BY THE COUNCIL.

- ASHBY : THOMAS, D.Litt., F.S.A., Director of the British School at Rome, Valle Giulia, Rome, Italy.
 BELL : CHARLES FRANCIS, M.A., F.S.A., Ashmolean Museum, Oxford.
 CLUTTON-BROCK : ARTHUR, B.A., The Red House, Godalming
 COCKERELL : SYDNEY CARLYLE, M.A., Director of the Fitzwilliam Museum, Cambridge.
 CORNFORD : LESLIE COPE, 3 Melina Place, Grove End Road, N.W.8.
 CRANAGE : REV. DAVID HERBERT SOMERSET, Litt.D., F.S.A., 8 Park Terrace, Cambridge.
 MONTGOMERY : HENRY GREVILLE, J.P., 39 Wynnistay Gardens, W.8.
 NEW : EDMUND HORT, 17 Worcester Place, Oxford.
 PHILLIPS : R. RANDAL, Atherton House, Ham, near Richmond, Surrey.
 WELLER : HENRY OWEN, B.Sc., M.Inst.C.E., Director of Building Research, 16 and 18 Old Queen Street, Westminster, S.W.1.

R.I.B.A. CERTIFICATE BOOK.

In response to a large number of enquiries the R.I.B.A. have obtained prices for printing the names and addresses of Architects who use the R.I.B.A. Certificate Book. Members and others are notified that Architects' names and addresses can now be printed or stamped on the Certificates at the rates set out below. These charges are additional to the price of the Certificate Book itself (8s. 6d.) :—

(1) Printing in Name and Address from line block, lettering same style as Certificate, stripping present binding and rebinding :

1 Book	..	..	£1 12 6	Each
2 Books	..	..	1 16 6	Name
3 Books	..	..	2 0 6	and
6 Books	..	..	2 9 6	Address.

(2) Stamping in Name and Address from Rubber Stamps, lettering same style as Certificate :

1 Book	..	..	£1 3 0	Each
2 Books	..	..	1 8 0	Name
3 Books	..	..	1 12 6	and
6 Books	..	..	2 6 0	Address.

Sample copies of the R.I.B.A. Certificate Book can be seen at 9, Conduit Street, W.1, or at the office of any Allied Society in the United Kingdom.

A French architect, S. A. D. G., living at Guingamp (Côtes du Nord), would like his eldest daughter to spend one or two months in England with the family of an English architect, one of whose children he would be glad to take in exchange for the same period. Further particulars supplied on application to the Secretary, R.I.B.A.

R.I.B.A. JOURNAL.

The special subscription for the JOURNAL for members of the R.I.B.A. Allied Societies is 12s. per annum (post free).

Members' Column

ROOM WANTED.

ONE unfurnished room wanted by architect as office in London.—Apply Box 2842, c/o Secretary R.I.B.A., 9 Conduit Street, London, W.1.

PARTNERSHIP.

AN ASSOCIATE would be glad to consider proposals for partnership from a Member, who, unless possessed of private means, should be unmarried. Old-established practice in a beautiful district, 1½ hours from London.—Apply Box No. 1052, c/o Secretary R.I.B.A., 9 Conduit Street, London, W.1.

F.R.I.B.A., 8 years in own practice before war, 5 years war service (Lt.-Col., R.E.), since 1919 engaged on Housing, recently resumed practice, has useful connection and work in hand, is desirous of arranging partnership in established firm.—Apply Box 8522, c/o The Secretary R.I.B.A., 9 Conduit Street, London, W.1.

ASSOCIATE, 29, wishes to purchase partnership in London firm; 2½ years' practice. Contracts amounting to £35,000.—Apply Box 1752, c/o Secretary R.I.B.A., 9 Conduit Street, W.1.

APPOINTMENTS WANTED.

A.R.I.B.A., 28, urgently requires position as assistant. Working drawings, details, specifications, surveys. Experience in domestic, commercial, and church work. Excellent testimonials; neat and accurate draughtsmen. Moderate salary. London or suburbs preferred.—Apply Box 2921, c/o Secretary R.I.B.A., 9 Conduit Street, W.1.

A.R.I.B.A., young, capable and enthusiastic, desires post; accustomed to responsibility, design, working drawings, details, specifications and supervision; good London office references.—Apply Box 4315, c/o Secretary R.I.B.A., 9 Conduit Street, W.1.

STUDENT, R.I.B.A. (21), just completed articles in busy office, desires further experience, London or Provinces.—Apply Box 3522, c/o Secretary R.I.B.A., 9 Conduit Street, London, W.1.

Minutes XVI

SESSION 1921-22.

At the Thirteenth General Meeting (Ordinary) of the Session 1921-1922, held on Monday, 15 May 1922, at 8 p.m.—Mr. Paul Waterhouse, President, in the chair. The attendance book was signed by 17 Fellows (including 5 members of the Council), 22 Associates (including 2 members of the Council), 3 Licentiates, and a number of visitors.

The Minutes of the Annual General Meeting, held on 1 May, having been taken as read, were confirmed and signed.

The Hon. Secretary announced the decease of the following members : Mr. Lacy William Ridge, elected Associate 1863, Fellow 1879, Resigned 1912; Mr. Arthur William Cooksey, elected Associate 1888, Fellow 1910; and Mr. Thomas Batterbury, elected Associate 1881, Fellow 1894, Resigned 1912. It was RESOLVED that the regrets of the Institute for the loss of these members be recorded on the Minutes of the Meeting, and that a message of sympathy and condolence be conveyed to their relatives.

The following members attending for the first time since their election, were formally admitted by the President :—Messrs. H. B. Challen, H. W. Couchman, E. W. Creegan, J. H. Greenwood, T. F. Ripplingham, and C. Scriven, Associates.

The Secretary announced that the Council had nominated for election to the various classes of membership the gentlemen whose names were published in the JOURNAL for 8 April 1922.

The Secretary announced that the Council, acting under the terms of By-laws 24 and 25, had suspended Mr. R. R. Gail from Associateship of the Royal Institute for a period of twelve months.

Mr. J. Alfred Gotch [F.], F.S.A., having read a paper entitled, "The First Half-Century of the R.I.B.A.," a discussion ensued, and on the motion of Mr. W. B. Worthington, President of the Institution of Civil Engineers, seconded by Mr. John Slater [F.], a vote of thanks to Mr. Gotch was passed by acclamation and was briefly responded to.

The proceedings closed at 9.55 p.m.



EARL DE GREY
First President, R.I.B.A., 1835-59

The First Half-Century of the R.I.B.A.

By J. ALFRED GOTCH [F.], F.S.A.

Read before the Royal Institute of British Architects, Monday, 15 May 1922

THE eloquent prelude to the tribute of praise paid to departed worthies, which is to be found in the 44th chapter of Ecclesiasticus, is also an apt prelude to the story of the early years of the Royal Institute. It need not be quoted in its entirety, a few phrases will suffice :

"Let us now praise famous men, and our fathers that begat us . . . Leaders of the people by their counsels, and by their knowledge of learning meet for the people, wise and eloquent in their instructions. . . . Rich men furnished with ability, living peaceably in their habitations."

The aptness is obvious. We can all agree that architects may become famous, we cannot deny that our fathers begat us, we can concede that some of us become leaders by our counsels, and some, although perhaps fewer, by a knowledge of learning ; we can

easily believe that wisdom is apparent in us and eloquence latent, but "rich men furnished with ability" gives us pause. There is no difficulty about the ability, but a "rich architect" would strike most of us as a contradiction in terms. And yet there were, in the early days of the Institute, architects rich enough and generous enough and sufficiently devoted to its interests to endow it handsomely.

The picture of the Institute in its earliest times is one in which the foreground is filled with men of ability, some of them famous and many of them with a wide knowledge of learning, while the background is dimly peopled with others neither rich nor furnished with much ability and living peaceably in their habitations unstirred by the eloquence or wisdom of their more energetic brethren.

The Institute was not the first association of archi-

fects who banded themselves together for mutual support and instruction, but it was the most enterprising and the most enduring.

Already in the year 1806 the *London Architectural Society* had been founded, with rules of almost Draconian severity. The reason given for its inception was that "among the Institutions so liberally established in this City there is not one calculated for the encouragement of Architecture. The feeble protection afforded by the Royal Academy can hardly be deemed an exception." The encouragement and protection offered by the Society were not calculated to be widespread, for every ordinary member was required to produce annually an architectural design never before in any way made public, under forfeiture of two guineas, and an essay, under forfeiture of half-a-guinea. The Society met once a fortnight for the purpose of discussing these productions, and anyone who was absent from two successive meetings was fined five shillings. The designs and essays became the property of the Society, who published such as they thought worthy of the honour, and generously presented two copies to the author. A society with such exacting regulations was necessarily rather exclusive, and, indeed, it is a matter of wonder whether after filling the offices of President, four Vice-presidents, Secretary and Treasurer, there was anyone left to play the part of ordinary member. However, it attracted a number of the leading architects of the time, including such men as Ashpitel, Billings, Elmes, and Joseph Woods. But it did not live long: probably its own good qualities were its undoing.

Another Society was instituted in 1831, called the *Architectural Society*, of which the ultimate ambition was "to form a British School of Architecture, with the advantage of a Library, Museum, Professorships and periodical exhibitions." For some reason, of which there is no record, this Society did not satisfy architects of the time, for in January, 1834, a meeting was held at the Freemasons' Tavern to form another society, "for the study of Architecture and Architectural Topography." The promoters, however, could not agree upon either the objects to be aimed at, or the conditions of membership, so a few of them decided to hold another meeting at another hotel, and a committee was appointed which included such names as P. F. Robinson, Kendall, Goldicutt, Fowler, Donaldson and Noble. The business of the committee was to draw up a scheme for the formation of an Institution to up-

hold the character and improve the attainments of Architects. Their labours must have been attended with success, for at a subsequent meeting Messrs. Barry, Basevi, Decimus Burton, Cresy, J. Gwilt, Hardwick, Kay, Lee, Sir J. Rennie, Papworth, Robinson, Seward and G. Taylor were elected as original members.

By the end of 1834 the new Society, under the style of the "Institute of British Architects," was so far constituted as to have a council and a number of ordinary members, for on the 18th of that month the honorary secretary, Thomas L. Donaldson, issued a notice of a meeting of the Council on the following Tuesday at 7 o'clock, to be followed by a special general meeting and an ordinary meeting of members in order to take into consideration a recommendation that the number of the council should be increased.

This is the earliest written record concerning the Institute that has been preserved in its archives. The writer is the accomplished Professor Donaldson, the only one of the founders who was alive at the end of the first fifty years of its existence, and one who during the whole of that period took an active part in its affairs, and indeed did probably more than any other person to mould its policy and direct its activities.

On 1 January 1835 another notice for an ordinary meeting was issued, and as the draft directs 18 copies to be made, it is not unreasonable to assume that that number represented the membership at the time. On 30 January a summons was issued for a council meeting to be held on 3 February in order to consider the desirability of "taking the adjoining room," and as to the election of a President. This notice is signed by Thos. L. Donaldson and John Goldicutt as honorary secretaries. The headquarters of the infant Institute were then at 43, King Street, Covent Garden—in other words, at Evans's Hotel, wherein was situated that Cave of Harmony to which Clive Newcome was taken by his father under the guiding hand of Thackeray. The suggestion of taking the adjoining room indicates an actual or prospective increase of members, and the other matter for consideration, the election of a President, was of first-rate importance, for it resulted in that office being filled by Earl de Grey, whose influence did much to raise the new society from comparative obscurity to the position of being the leading body of architects in the kingdom and, eventually, in the Empire.

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It is clear that the year 1834 saw the inception of the Institute and its definite beginning, but it took nearly a twelvemonth to become fully equipped, and a notice to its members, signed by Donaldson and Goldicutt, marks its first meeting as a fully constituted body. They intimate on 3 June 1835, that "The opening meeting of the Institution will be held on Monday the 15th inst., at 8 o'clock in the Evening. The council have transmitted invitations to the President and principal members of the Antiquarian, Dilletanti, Civil Engineers, Geological, Asiatic, Royal and Architectural Societies, and also of the Royal Academy. Your attendance is particularly requested on this occasion and a Ticket is enclosed for your Visitor. A Copy of the Laws is also sent herewith for yourself, and one for your Friend, should you deem it desirable to furnish him with it." The notice proceeds to ask for cordial co-operation, and for the titles and scope of any papers which members might have in preparation or contemplation.

Here, then, we have the definite launching of the new society, of whose life-story the first fifty years is now to be briefly related. At its conclusion it will be found that a greater development and more momentous changes have occurred within our own memory than during the earlier period of its existence.

At this meeting the President, Earl de Grey, stated the objects of the new Institution, and pointed out the advantages which Architecture, as a national art, would derive from its foundation. Whether the noble President's expectations have been entirely fulfilled is perhaps doubtful. But this I think we may say—that the public do take a more intelligent interest in architecture than they did at that period, far as it still falls short of what we desire. We may then ask ourselves, or ask each other, how far the policy of the Institute during its first fifty years was calculated to confer advantages on Architecture as a national art, and how far the changed policy of the present day is likely to succeed in that object?

The President's opening remarks were followed by an address by the senior secretary, Mr. Donaldson. He announced that already 80 members had been enrolled, that communication had been established with several foreign Academies, and that the nucleus of an excellent Library had been formed. He proceeded to express a hope that prizes would be offered to young architects for original designs

and for measured drawings of old buildings, and that facilities would be afforded to students for foreign travel. He also mentioned the opportunities which would be given at the ordinary meetings of the Institute for discussing matters of scientific and antiquarian interest. In fact, he foreshadowed at that opening meeting many of the principal objects which the Institute has made its own.

The ambitions of its founders were indeed wide: the Institute was to have international relations; in the earlier records appear the names of more foreigners seeking honorary membership than of natives seeking ordinary membership. Already in the month succeeding the inaugural meeting, Donaldson, one of the secretaries, submitted a "Paper of Queries on all subjects of Architectural Investigation. Drawn up by the authority of the Council, for the purpose of distribution throughout the world." Matters of perhaps less portentous moment were not neglected, and we find subjects discussed which would be of interest to ourselves. At the last meeting of the session of 1835 Mr. Papworth, Vice-President, read a Paper, "On the benefit resulting to the Manufactures of a Country, from a well-directed cultivation of Architecture and of the Art of ornamental design, as an essential portion of its study." Might we not ask, with some trepidation, how far such a Paper might now be useful, after a lapse of nearly ninety years? At the same meeting Mr. Britton, whose books are still our own delight, offered "some observations upon the style of Domestic Architecture prevalent in England from the time of Edward 4th to that of James 1st," illustrated by a series of drawings of old mansions of that period furnished by Mr. Britton, and exhibited for two days, within stated hours, for the inspection of members and their friends. How different this method of illustration, and how far less efficient than our modern method of photographic slides: Yet it will be within the recollection of many of us that, in our early days, illustrations of a Paper, laboriously prepared, had to be examined after its conclusion, instead of being thrown upon the screen to elucidate each point as it occurred.

Another Paper, read in the following session, has an appeal to me which I cannot resist. It was a "Paper by George Gutch, Fellow, containing an account of the Original Drawings and Designs by Inigo Jones, Sir Christopher Wren and James Gibbs, Architects, preserved at Oxford." Unfortunately there were no Transactions published in those early

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years of the Institute, nor were there any architectural journals in existence, and so these valuable contributions are not available for reference.

Hitherto the notices of meetings had either been written or lithographed, but on 3 May 1836, they assumed the dignity of print, and the circular of that date announces that at the annual general meeting on Monday last the officers elected were—President, Earl de Grey; Vice-Presidents, Charles Barry, John B. Papworth, and P. F. Robinson; Secretaries, T. L. Donaldson and Charles Fowler; together with 7 members of Council.

The Institute was now well established. The first volume of its *TRANSACTIONS* was published in this year, the cover adorned with its well-known device or seal, the design of which has since been modified: I have found no mention of the original designer. It proceeded in November of the same year, 1836, to secure its status still further by applying for a Charter of Incorporation. On the 7th of that month the necessary resolution was passed at a special general meeting, and with almost incredible speed its terms were formulated, by-laws were drawn up, and on 6 February following His Majesty's Charter was laid on the table, the date of its grant being 11 January.

This Charter remained in force during the whole of the period now under review; it was supplemented a year or two after the close of that period. The by-laws first adopted form the foundation of those by which we are now governed, and no greater tribute than these facts could be paid to the wisdom and foresight of our founders.

It is interesting to note that the meeting at which the charter was laid on the table had been adjourned for a week on account of the death of Sir John Soane, one of the "rich men furnished with ability," who have generously endowed the Institute. He made the munificent donation of £750, which was commemorated by the foundation of the Soane Medalion, the gaining of which is the eager ambition of young architects.

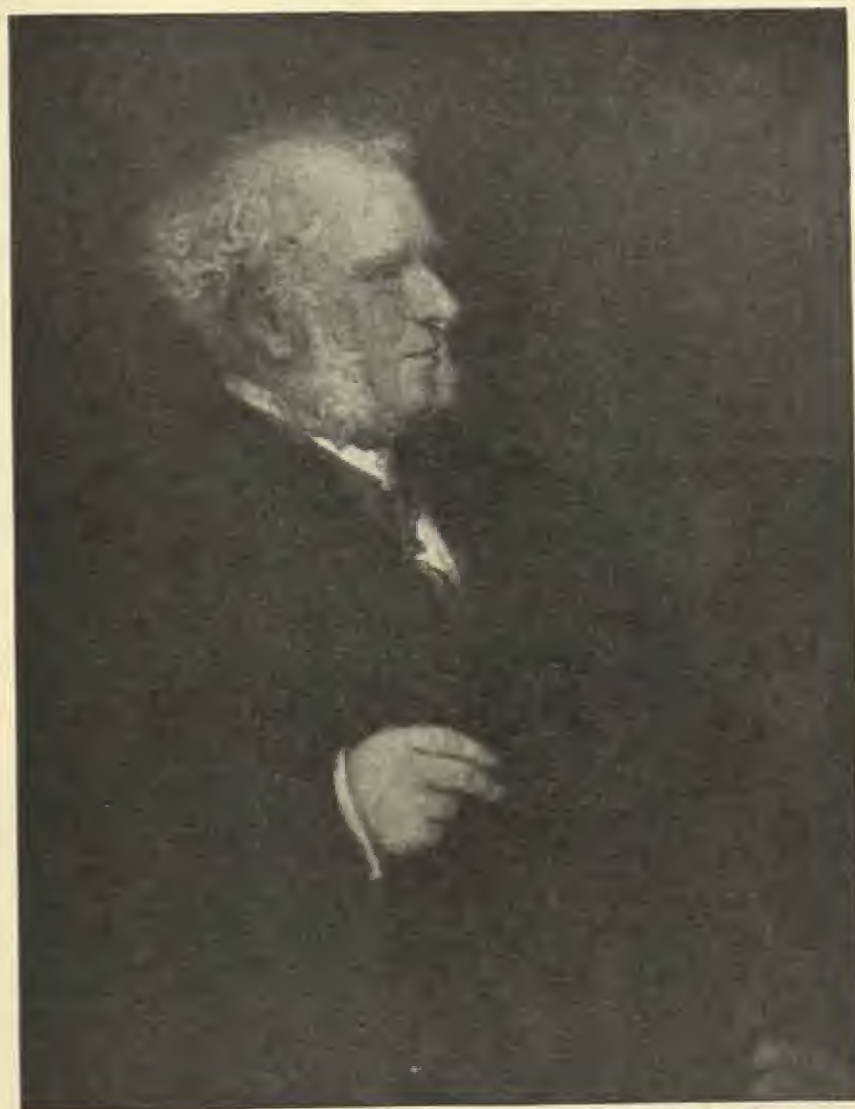
The Institute of British Architects was now an important and well recognised body, although it was not yet "Royal." The young Queen became its Patroness; its President was Earl de Grey, "an amateur of considerable cultivation and artistic taste," and a person of great influence in high quarters; most important of all, it included in its membership nearly all the leading architects of the time with the exception of the Royal Academicians.

According to the Report of the Council read on 22 May 1836, and prepared by the Vice-President, P. F. Robinson, whose contributions to the literature of architecture are well known, very severe reflections had been cast upon the architects of the time, and in order to counteract these and to advance the Art of Architecture, towards which it is implied that the Royal Academy was somewhat indifferent, the Institute had "burst into existence," a phrase conveying a sense of its rapid inception and assured success.

This Report is the first of the series which has been continued yearly ever since; and I know I shall have the sympathy of those, at any rate, who do not master the contents of these annual documents when I say that I have perused the gist at least of the whole series concerned with the first fifty years of the Institute. Let me relieve your apprehensions at once by saying that I am not going to give even the gist of each of these Reports, but the first one issued is entitled to a little consideration. Among other things it asserts that some years since a report of the House of Commons expressed in strong terms an opinion that no architect in this country could be found capable of carrying a great work into effect. In refutation of this injurious charge the Report adduces the fact that ninety-five designs had recently been submitted in the important competition for the new Houses of Parliament, designs which exhibited the talent of the day in a most favourable point of view. It congratulates the Institute upon the gaining of prizes by two of its members, Messrs. Barry and Railton, the former of whom has been selected as the successful candidate and his design adopted by the Legislature. Another competition mentioned is that for the Fitzwilliam Museum at Cambridge, which had been won by Mr. Basevi, also a member of the Institute.

The foreign correspondence, opened with professors in every part of Europe, with its attendant benefits to students going abroad, is another matter dwelt on with satisfaction, and congratulations are expressed at the election of Mr. Donaldson as a corresponding member of the Institute in Paris and the Academy of Fine Arts in Parma.

A wish is expressed that models might be made of the designs then being exhibited for the new Houses of Parliament and that the Institute might look forward to possessing a museum "enriched with representations of the most celebrated buildings of ancient Greece and Rome, with those of our own



From a Painting by Charles Martin

PROFESSOR THOMAS L. DONALDSON
President 1863-65



SIR CHARLES BARRY
Royal Gold Medallist 1850



CHARLES ROBERT COCKERILL
President, 1860 ; First Royal Gold Medallist, 1848



SIR JAMES PENNETHORNE
Royal Gold Medallist, 1865



SIR G. GILBERT SCOTT
President, 1873-76 ; Royal Gold Medallist, 1859



Sketch by R. Phené Spiers

AN EXCITEMENT AT THE R.I.B.A.



- 1 F. Cockerell
- 2 J. Whichcord
- 3 Ch. Eastlake
- 4 Wm. White
- 5 J. P. Seddon

- 6 Prof. R. Kerr
- 7 Prof. Donaldson
- 8 Arthur Cates
- 9 Horace Jones
- 10 H. Dawson

- 11 E. Ferrey
- 12 The Silent Member
- 13 Ewan Christian
- 14 Prof. Roger Smith
- 15 R. Phené Spiers



Photograph kindly lent by Mr. F. G. Austin

EXHIBITION OF 1851

Sir Charles Fox, Owen Jones, Sir Joseph Paxton, Matthew Digby Wyatt, H.R.H. the Prince Consort.

country, made to the same scale." This aspiration, attractive as it is, has not been fulfilled.

I dwell upon this, the earliest Report of the Council, not only because it chronicles the progress of the Institute since its establishment in the year 1834 (as it says), a progress which has realised the fondest wishes of its warmest friends, but because it sets forth many of the objects had in view by those early leaders who, by their counsels, their knowledge of learning and their wise and eloquent instructions, gave its character to our Institute.

Mention is made of the excellent series of papers contributed by members and to the fact that the most important of them were to be published in the first volume of *TRANSACTIONS*, a publication which had a separate existence for many years, but which is now merged in the *Journal*. Attention is called to the collection of building stones then being formed

and its value in connection with the Lectures on Geology which the Council had established. Then comes a reference to the portraits which adorned the walls and a wish is expressed that they might be the commencement of a series—a wish that has happily been gratified, for the Institute's collection of portraits is probably unrivalled in any society of the kind. It is also announced that a medal is to be designed by Mr. Benjamin Wyon, intended as a prize medal to be given annually, whereas the Soane medal was to be given occasionally. The last matter of interest is the record of the death of the Librarian, Mr. James Ashley.

These, all too baldly stated, are the principal subjects of the first Report, and while some of them have come to naught the majority of them are still of vivid interest to the present generation.

The most important event during the next year,

1837 (apart from the Charter), was the transfer of the Institute to better rooms, an indication of its growth. The noble president, accompanied by the council, inspected several suites, and eventually that at 16, Lower Grosvenor Street, near Grosvenor Square, was taken; and there the headquarters remained for 22 years, until the removal to our present premises was made in 1859. It is not without interest to learn that a lecture on Dry Rot was given in the spring, and that during the summer a Register of Assistants seeking engagements was started.

During the following year, 1838, two matters engaged the attention of the Institute which are calculated to stir our hearts even at this distance of time. One was the proposed fusion of the old Architectural Society with the Institute, the other was the consideration of "the present defective practice of Competitions." The question of fusion seems to have been beset with the difficulties we know so well by experience. It roused a spirit very inimical to the "living peaceably in their habitations" of those concerned; and it serves to remind us of those qualities of wisdom and forbearance which are still necessary if the long-desired unity of the profession is to be achieved.

The consideration of the defective practice of competitions resulted in a report of the committee, issued in 1839, in which the well-known arguments, grievances and remedial suggestions were set forth. The same subject came up for consideration at intervals during the whole of the fifty years under review, and no solution of the problem was found, until by a process of evolution the present regulations were adopted. Let us hope they give the satisfaction which their long incubation deserves. There is no need to enter into the dreary details of this subject; there is but one gleam of humour to lighten its gloomy history, and that springs from the fact that in the year 1859 it was feared that unless the Institute interfered the custom would become established of constituting the competitors themselves as the jury for deciding the awards.

There is a considerable amount of interest, to those who have leisure, in reading the yearly reports and the much more frequent notices of meetings. Therein we can watch from week to week and from year to year the life of the Institute, uneventful or the whole, but marked from time to time by happenings worthy of special record. Well-known names flit across the pages. We learn at first hand how the Nestors of our youth were themselves once the

infants of the Institute. We realise how learned were our predecessors and how the fruits of their learning were consigned to the oblivion of the *TRANSACTIONS*. We hear a continual cry for papers, yet papers were forthcoming; as though this branch of activity were always on the verge of bankruptcy which was always averted by fresh funds being placed at its disposal.

One of the outstanding events of this early period was a visit, in the year 1843, of our patron the Prince Consort, or Prince Albert as he was then styled, to a meeting of the Institute. It was on 3 April, and the occasion was the distribution of prizes. Punctually to his time the Prince arrived, attended by two of his suite. He was received by the Vice-Presidents and the Honorary Secretaries, dressed, we may be sure, in the fashion dear to our fathers or grandfathers, in frock coats, low cut waistcoats, showing a vast amount of white shirt front, large stick-up collars into which their chins sank, and on which their side whiskers rested, collars wound round with long black neckties with a large bow in front. His Royal Highness was conducted to the Library, where the other members of Council were presented, and then a council was held at which he presided, and at which it was thought wise that only formal business should be transacted. This ended, he inspected the casts and models (the Prince was notoriously conscientious), and then he took the chair at the general meeting. In spite of the august atmosphere which must have been generated the ordinary routine was followed. The minutes were read, some donations announced, and Mr. Donaldson, secretary for foreign correspondence, read several letters from Milan, Coblenz and Paris, presumably in the languages current at those places.

Then followed the distribution of prizes, which were less in number than they are now. The Soane Medallion was the first, the subject being a Princely Palace as described by Bacon. Mr. Charles Fowler, honorary secretary, read Bacon's description, and the winner, Mr. A. Johnson, was presented to the Prince and received the medal from his hands—or was it, as was sometimes the manner then, from the less overwhelming hands of one of the suite? In like manner, whichever it was, Mr. E. Chamberlain, of Leicester [provincial members, please note], received the Institute Medal for his essay on the subject, "Are synchronism and uniformity of style essential to beauty and propriety in architecture?" and a medal of merit was awarded to Mr. J. W.

Papworth. Mr. Papworth we many of us knew, and anyone can get to know his literary work ; but who were the medallists, Mr. A. Johnson, and Mr. E. Chamberlain, of Leicester ? After the prizes a communication was read by the secretary " On the modes usually adopted in forming foundations in the city of Venice," and with that the ordinary proceedings ended. But so special an occasion demanded special thanks to the Royal Chairman, and these were fitly expressed by Mr. Charles Barry. Thus far, it may be gathered from the contemporary report, the Prince had made no observation, but in reply to Mr. Barry's thanks he broke the silence of his visit. " Gentlemen, it gives me pleasure to have this opportunity of meeting you." Thereafter the assembly dissolved, and the opportunity of meeting the Institute again was never revived.

But the interest of Royalty in the affairs of the Institute was awakened again three years later, no doubt through the good offices of Earl de Grey, and on 27 April 1846 the gift of a Royal Gold Medal was announced. The medal was intended as an encouragement to young architects by a competition in design, and the subject set for the first competition, which was held in 1847, was the very suitable and practical one of premises for the Institute itself. Eleven designs were submitted, but they missed the mark so entirely, they were, most of them, so grandiose and expensive—in short, they so widely disregarded the conditions imposed, that the medal was not awarded.

This fiasco sealed the fate of the junior members of the profession in regard to the Medal, and it was decided to award it in future not to the immature work of the young, but in recognition of the actual achievements of the older men. The royal donor agreed to the change and, accordingly, in the following year, 1848, the first recipient of the Royal Gold Medal was Charles Robert Cockerell. The names of the distinguished men upon whom it has been bestowed since that day may be seen in the *Kalendar*, and it is needless to mention them here. Nor is it necessary to pursue the history of the Medal in detail, it may be found fully recorded by our late Editor in the JOURNAL of 25 June 1921. It is enough for the present purpose to mention its foundation and the rather curious but happy change in its purpose which circumstances dictated.

It is impossible within the limits of a Paper to which an audience may be expected to listen during one evening, to mention some noteworthy event in

every year of the Institute's history, and we must pass lightly onwards, only recording a few matters that strike the fancy. Such, for instance, are the congratulations given in 1847 to Mr. Barry on the completion of the House of Lords : and the model exhibited in 1848 of the scaffolding used in the erection of Nelson's Column in Trafalgar Square. Then came the shadow cast before the coming event of the Great Exhibition of 1851. The Report for 1850 takes high-flown credit for a donation of £50 from the Institute towards that remarkable movement, which, " under the enlightened direction and zealous patronage of His Royal Highness the Prince Consort," was to achieve a revolution in the arts and industries of the world ; a movement which " may lead us to hope," says the Report, " that ere long, England may vie with France and Italy in wedding the refinements of colour and material and the attractive effects of a less sparing embellishment to forms, which Greece might have approved, and which Rome or Mediæval art could not have excelled." It would be an interesting theme for discussion as to how far these hopes have been realised in either of the countries named.

The enlightened direction and zealous patronage of his Royal Highness in the building of the Exhibition is recorded in an interesting print (kindly lent by Mr. F. G. Austin) of the committee responsible for the Exhibition Building. In it he is represented as examining a drawing submitted and expounded to him by Sir Joseph Paxton, with the respectful support of Mr. Matthew Digby Wyatt, Mr. Owen Jones and Sir Charles Fox.

The building of the 1851 Exhibition became the Crystal Palace at Sydenham, and the same spirit of educational progress which animated its designers followed it to its new quarters, for we find the Institute commending the directors of the enterprise for their spirited conduct in getting Signor G. Abbati, of Naples, to produce a facsimile of a Pompeian dwelling beneath its roof and in procuring casts of celebrated sculpture ; and a year or two later the courts of the Crystal Palace were recommended to students as admirable objects of study.

The year of the Great Exhibition also saw the establishment of that beneficent institution the Architects' Benevolent Society, which has done so much to relieve the hard lot of necessitous architects.

Then came in 1855 the first stirring of the waters in relation to one of the most important activities of the Institute, for on 3 December, in the course of a

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discussion on a Diploma in Architecture, a memorial was read from the Architectural Association asking for the establishment of an Examination. The subject was considered by the Council from time to time, and five years elapsed before, on 25 June 1860, a resolution was passed in favour of affording an opportunity of a Voluntary Professional Examination. Two more years were needed for developing the idea, but at length, in May 1862, Regulations for the Voluntary Architectural Examination were printed and issued. For twenty years the system of voluntary examinations was pursued with varying success. Sometimes the number of candidates was a subject of congratulation, at others it was so small that no examination was held. The twelfth and last was held in June 1881, and on 28 March 1882 the first compulsory Examination of candidates for the Associateship took place, and was "attended with unlooked-for success." This definite land-mark in the history of the Institute was established two years within the limit of the half century assigned to the story I am telling.

The policy of the Institute, founded on its early experience of the failure of such lectures as it had promoted, as well as of "a school of Art, accessorial to Architecture"—an event hardly to be deplored in so far as the interests of euphony are concerned—its policy was definitely opposed to its becoming an instrument for teaching young architects. It was content in directing their studies, in aiding them with its ever increasing Library and in exciting their emulation by the offer of prizes and medals. From this policy it has not swerved, and in view of the still wider fields of administration which present conditions require it to cover, it is not likely to swerve.

The voluntary examination of its own members was not the first experience of the Institute in that direction, for already, in 1856, it had been appointed, under the Metropolitan Building Act, the examining body for the District Surveyors established by that Act. This consummation was achieved largely through the influence of Sir William Tite, M.P., and the Institute still continues to exercise the powers then conferred.

In the year 1859 occurred the first noteworthy break in the personality of our founders, for on 14 November of that year died Earl de Grey, who had been President since the founding of the Institute five-and-twenty years before. To him we owe a great debt of gratitude, for not only did his con-

nection shed lustre on our proceedings, but through his instrumentality it was that the Institute achieved almost at once its high position among societies of the like kind. To his good offices we may also attribute the early granting of our charter.

Under by-law 23 of the first issue the President could only hold office for two years in succession, but the by-law had been periodically suspended in order to retain the presence of Earl de Grey, and since his death it has, with one or two exceptions, been acted upon ever since. Moreover, Earl de Grey's successors in the chair have, with the exception of Mr. Beresford Hope, all been practising architects, men who have made a mark more or less legible in their profession considered apart from their activities within the Institute. Those who come within our cognizance on this occasion are twelve, and it is worth while to mention their names in order to show that the Institute has maintained a high standard in selecting its head. They are C. R. Cockerell, Sir William Tite, Thomas L. Donaldson, A. J. B. Beresford Hope, Thomas Henry Wyatt, Sir Gilbert Scott, Charles Barry, John Whichcord, G. E. Street, Sir Horace Jones and Ewan Christian. In connection with this high office the desire for distinguished men has been gratified, a desire which, in relation to the Council itself, led to a suggestion in 1877 that it should be composed of the most distinguished members of the Institute. Whether that wider desire has also been regularly gratified, who shall say? Doubtless the members of all councils, recent or otherwise, have considered that it has been, and if any outsiders have harboured doubts they must have been consoled by the reflection that with the spread of democratic government it was wise that all members should be represented, whether distinguished or not.

The one exception to the rule of electing architects to the Chair, Mr. Beresford Hope, left his mark upon the Institute, for it was during his term of office, and in consequence of his influence, that the epithet "Royal" was added to our title, and since the year 1866 we have been known as the *Royal Institute of British Architects*.

It was in that same year that another significant change was made, that of appointing a paid secretary. Hitherto the work had been done by two honorary secretaries, while a third devoted his attention to foreign correspondence. But owing to the increase of membership, and the ever-widening field of the Institute's influence, the work became too

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onerous. An assistant secretary was therefore appointed with a salary, the two honorary secretaries being retained, one for foreign correspondence and one for home duties. This arrangement was gradually modified, and eventually the position became what it is to-day, with a paid secretary to run the administrative machine and an honorary secretary to do the work usually allotted to those distinguished gentlemen.

The Institute is to be congratulated upon the change, and upon the choice of the two gentlemen who filled the office in succession during its first half-century—namely, Mr. Charles Eastlake and Mr. William H. White. Their zeal was indefatigable. I doubt if any of us remember the first, but many of us do the second, and will not be surprised to hear from Mr. Northover, the late Editor of the *JOURNAL*, that Mr. White and he often spent a large part of the night after some important meeting in dealing with the business arising therefrom. Mr. Northover says that "he and I often worked together till two, three, or four in the morning, and turned up promptly at the regulation office hour after three or four hours' rest."

This is the last of the important constitutional changes which occurred during the first half-century of our existence. The close of that period found the Institute following much the same path as it had hitherto trodden. It was at once a learned society and one to further the interests of architects and, through them, those of Architecture. It represented, as the Report for 1872 said, the interests of Architecture both as a Profession and an Art. But its tendencies were rather oligarchical. Associates had no vote. Its active members were all London men. Its policy was against the affiliation of societies in the provinces, although it was prepared to bestow a benevolent interest upon them. Into the changes which have occurred since the close of the period under review there is no occasion to go this evening. They began with the granting of the Supplemental Charter in 1887, and we may say with truth that we are pursuing to-day the same objects that the Institute has always pursued, but with wider and more comprehensive methods.

Among the matters which from time to time engaged the attention of the Institute or its council in its early years, and which have resulted in pronouncements of the greatest value to architects and are calculated to maintain the high status of the profession, are the conduct of competitions, the re-

pudiation of commissions from tradesmen, the rules of professional practice, the scope of an architect's duties together with the scale of his remuneration, and the conditions governing building contracts. In fields less closely connected with the legal aspect of our duties may be mentioned such matters as the conservation of ancient buildings and hints to workmen in their restoration. Other matters upon which the Institute took a sensible view, but which did not reach a definite decision, were artistic copyright and the ownership of drawings. It is obvious that however learned the Institute was in its early days, however much interested in its foreign correspondence, in endeavouring to collect every known edition of Vitruvius or in the refinements of design in the Parthenon, it had the practical welfare of its members at heart.

Outside its own domestic concerns it kept an eye on matters of general interest connected with architecture. It tendered advice as to the royal tombs in Westminster Abbey; at the request of the Government in 1846 it gave its opinion as to the equestrian statue of the Duke of Wellington on the top of the archway into the Green Park, which opinion was that it was "unsatisfactory and its position there most objectionable"; it endeavoured to preserve some of the amenities of London which were threatened by improvements or new buildings; it concerned itself with the City churches, with the preservation of ancient buildings in country towns, with the Palestine Exploration Fund, and the excavations at Nineveh. It had something to say about the Thames Embankment, the width of streets and lines of communication. It condemned utterly and successfully the idea of preserving the exhibition buildings of 1862, when once their purpose was served. In 1873 a Parliamentary Committee recommended to the House of Commons that the architectural design for the new street from Trafalgar Square to the Thames Embankment should be submitted for approval to the Council of the Institute, and in 1878, under Act of Parliament, the Council reported on the architectural elevations submitted to them, expressed their opinion and suggested alterations.

On one occasion, in 1859, the Institute, leaving the fields of art and learning, ventured into those of politics and presented a petition to Parliament praying that the elective franchise might be conferred on its members as a simple act of justice, seeing that the Government had in view the bestowing of it upon

other learned bodies. But learning, as such, save that resident in Universities, has not been held a sufficient qualification for the vote. Among the activities of the Institute must also be mentioned, although there is no need to enter into their details, the establishment of useful conferences of architects and of pleasurable conversaciones.

Passing for a moment from the Institute as a whole to some of its individual members, we may well come back to those "rich men furnished with ability," who gave to its funds. Some of them presented shares in the Architectural Union Company; their names are recorded, but not emblazoned. The



GEORGE EDMUND STREET
President, 1881; Royal Gold Medallist, 1874

memory of others is preserved in the prizes instituted by their generosity or in remembrance of them. In 1863 a fund of £1,000 was collected as a memorial to Augustus Welby Pugin, and a travelling studentship was founded as the result. There is no need to record in this place either the objects of the foundation or the names of those who have been advantaged by it, but I may be allowed, perhaps, to mention one fact—that nearly fifty years ago, in 1873, the annual report mentions that "the Pugin Studentship was awarded to Mr. Aston Webb,

his drawings being perhaps the most elaborate and carefully finished set that had ever been sent in since the Studentship was founded."

In the same year, 1873, died Sir William Tite, M.P., who had been twice President and had taken for many years an active part in the life of the Institute and who had rendered it noteworthy help in his capacity as Member of Parliament. He bequeathed £1,000 to our funds, which was devoted to the foundation of the prize which still bears his name. The Godwin Bursary, the Owen Jones Studentship and the Grissell Gold Medal are the other prizes which were founded during the first half-century of our existence—not a bad record, considering the modest fortunes (if any) which the pursuit of architecture produces.

There is one other of our institutions which must be mentioned before the close of this story, and that is our Library. It has been referred to incidentally, but it is a subject which appears in almost every report, and pages are filled with the record of donations to it. There is again no need to give the details of its history, even did time permit, for they have been fully set forth in a Paper read before the Institute by our Librarian, Mr. Dircks, and published in the JOURNAL for 4 and 18 December 1921. The Institute Library is recognised as the finest collection of architectural books, manuscripts and drawings which the world possesses. However much we may differ as to the aims, objects and policy of the Institute, or as to the efficiency with which they have been carried out, we can all agree that the Library alone would justify its inception and its existence.

Such is the history in outline of the first half-century of the Institute. But enough has been said to show the ability of those who founded it and fostered it and entered into the fullness of its success. They have left us a noble heritage, a heritage of practical knowledge of deep learning and of high endeavour. It is a heritage we must not waste, nor shall we. Rather will it urge us to increase it, and by facing modern conditions in a modern spirit leave to our children more than we received from our fathers. Yet while we grapple with problems of great practical interest, let us not forget the traditions which cling to us, traditions of learning, of high-mindedness, of gentle manners. So shall we worthily emulate those famous men, our founders, leaders of the people, wise and eloquent in their instructions.

Discussion

THE PRESIDENT, MR. PAUL WATERHOUSE, M.A., IN THE CHAIR

The PRESIDENT: We have with us to-night Mr. Worthington, who is President of the Institution of Civil Engineers. Worthington is a name which is very well known to us, as representing two generations of architects, two of the younger generation having been members of our Council in recent years; and it would be of great interest to us if he would be so good as to propose a vote of thanks to Mr. Gotch.

Mr. W. B. WORTHINGTON (President, Institution of Civil Engineers): It is not an easy matter for me to make a speech on a subject about which I know very little, but it gives me the greatest possible pleasure to move a vote of thanks to Mr. Gotch for his most interesting address. It brought to me more news than probably it conveyed to most of you, but it must have been of great interest to members of your Institute.

I noticed that in the invitations extended to the opening meeting of the Institute, in 1835, about 17 years after the first meeting of the Institution of Civil Engineers—of which I have the honour to be President this year—the President of the Institution of Civil Engineers was invited, indicating the pleasant relationship between the two great professions which obtained at that time, which I hope exists to-day, and which I hope may be even closer in the future. The President of the Institution of that day was James Walker, F.R.S., who succeeded Thomas Telford as President at the beginning of the year in which your Institute was opened. Telford had been President 15 years, and Walker remained President for 10 years; he was succeeded by Sir John Rennie, who was President three years. Since then no president has remained in office for more than two years, and he sits usually for only one year.

There is a matter I would like to mention, and that is the great pleasure I recently had in being associated with your President in judging some drawings sent in by younger engineers in fulfilment of the conditions of a prize given by the late Charles Hawksley, with a view to encourage young engineers to keep their designs within some reasonable distance of being offensive to architects. Hawksley, as you know, was remarkable for the excellence of the buildings which he put up all over the country in connection with many great waterworks of which he was the engineer. He felt very strongly that something ought to be done to teach engineers how not to do what there are always plenty of architectural critics to criticise. I know the subject is a thorny one, and I shall not occupy my short allowance of time in speaking further on it.

I would like to mention another illustration of the pleasant collaboration between engineers and archi-

tecs, although it goes back beyond my own personal memory. My father was the resident engineer at the making of the Lancaster and Carlisle Railway, and Joseph Locke and Errington were the engineers. Sir William Tite was associated with Errington in designing the stations for this line, and if there is a more beautiful station in England than Sir William Tite's at Lancaster Castle, I do not know where to find it. It is just what a building for that sort of place ought to be. It harmonises with the Castle and with the church tower above it, and, altogether, fits into the town in a way that railway stations generally do not.

There is another little incident of the same sort connected with the same railway. When the line was opened my father was engineer and manager. My uncle, Thomas Worthington, who was a member of your Institute and was known to some of you, was travelling at the time in Italy. My father wrote to him that he was building a locomotive works at Carlisle and was going to put up a bell tower, and asked him for a sketch of what he thought the top of it should be like. The result was the plain square brick tower, with a sloping Italian roof, which strikes every person who looks on the right-hand side of the line as he goes from Lancaster to Carlisle. I mention that merely as an instance of collaboration between the two professions.

I have the greatest pleasure in proposing that the thanks of the meeting be given to Mr. Gotch for his very interesting paper.

Mr. JOHN SLATER [F.]: It is with the greatest pleasure I rise to second the vote of thanks to my old friend, Mr. Gotch, for his most interesting paper. He has said that the changes which occurred in this Institute in the last fifty years are enormously greater than those which occurred in the first half-century. That is inevitable, essential and right. As the poet says:

"New occasions bring new duties,

Time makes old things seen uncouth."

No institution, no society, can hope to preserve its vitality unless it moves with the times, widens the basis of its operations, and increases its activities. I sometimes wonder what those men who were busy with the affairs of the Institute over fifty years ago would say if they were to come back now; if, for instance, the first paid secretary, Eastlake, whom I remember, though Mr. Gotch does not, were to come back and see how far-flung the activities of the Institute are: the Standing Committees, the examinations, the active interest which the Associates take in the Institute, and the work generally that is being done. He might have mingled feelings; he might be glad to see the progress which has been made, and he might thank his

stars that his lot had been cast in less exacting times ! I think I am the oldest member of the Institute taking any active part—though a very small one—in the work of the Institute who did so within its first half-century. When I go into the rooms upstairs—and I may say I never go there without regretting that we have abandoned the use of that noble room for our meetings, and that we have been banished to these nether regions, which, I think, do not fit the dignity of the Institute—when I go upstairs, those rooms are for me peopled with ghosts. My acquaintance with the Presidents of the Institute whom Mr. Gotch has mentioned was only a slight one. I remember Professor Donaldson, though not in the Presidential Chair, with his clear-cut face and noble head. We have an excellent portrait of him in the Institute. I was present at the dinner given by the Institute which was honoured by the presence of King Edward when he was Prince of Wales, at which Donaldson was present. I also remember once seeing Sir William Tite in the chair. After 1879, when I became an Associate, I was a fairly regular attendant at the meetings. I remember one very crowded meeting in 1880, when Mr. E. C. Robins read a paper on Sanitary Science in its Relation to Civil Architecture. All the well-known sanitarians were present : Captain Douglas Galton, Rogers Field, Dr. Richardson, Dr. Corfield, and many others. They aired their views in the discussion to so great an extent that they had to adjourn the meeting. In connection with the desirability, in those days, of instilling some of the principles of sanitary science into the minds of architects, I may mention one incident which I know to be true. An architect of some standing built a house for a client, in the country ; and after it was finished and had been occupied two or three months he said to an architect friend, " You will remember that house I built for So-and-so ? " " Yes. " " Well, the man has had the impudence to write to me to-day wanting me to go down because, he says, there is something wrong with his drain ! I wrote and told him to call in his plumber ! " Nowadays, however much we may think it desirable, we should hardly dare to do that.

The year 1881 was a memorable year for the Institute ; it was memorable to me because in that year I read my first paper, on Electric Lighting. I mention it to show what an enormous distance we have travelled in those 40 years. I was extremely anxious to show the new electric light in operation. Mr. Boyd was engaged in rebuilding the premises which afterwards became the Maddox Street Galleries, and which the Institute has recently purchased. The Otto Gas Engine people fixed up one of their gas engines for me. We had a motor, and took the leads in at one of the windows of an upper room, and just managed to get the current started at 5 o'clock on the day the paper was to be read. The engine and the current were so erratic that I had

an arc lamp installed in the dome, where I placed a man to regulate the carbons with his hands, in order that he might keep the light going. I think that was the first occasion on which any of the Swan lamps were shown here. They were lent to me by Mr. Spottiswoode. The year 1881 is memorable also for the contest for the presidency which occurred between George Edmund Street and Horace Jones. I was present at the meeting when the scrutineers announced the result of the voting, and I remember the cheers when it transpired that Street had been elected by a majority of, I think, two. Someone was waiting with a cab for the result of the election, and after the announcement at once hurried off, and in ten minutes Street had arrived and was inducted into the chair by Whichcord. Alas ! as we know, the new President died within a very few months of his election, to the irreparable loss of the Institute. It is a cause for the deepest regret that we have no portrait of the most eminent Victorian architect to adorn our walls. Street was succeeded by Horace Jones, who had a " corporation " typical of a Corporation official.

Then came Ewan Christian, who was architect to the Ecclesiastical Commissioners, a man of the highest honour, and almost quixotically punctilious on any point of professional conduct. I'Anson followed, and though I think his term of office was just outside the period we are considering, I may perhaps be permitted to recall one of the most amusing incidents I ever saw upstairs. Charles Garnier, who had been awarded the Gold Medal for that year, came over from France to receive it. I'Anson, after making a speech on his achievements, placed the cord round his neck, and then Garnier, to his utter amazement, mounted the platform and kissed him on both cheeks.

There are many members who used to frequent the rooms upstairs and of whom I have vivid recollections. There was Burges, a little short-sighted man with a caustic humour, who used to vary the monotony of his official life by inviting his friends to come to his office in Buckingham Street, Strand, and indulge in a rat-hunt. When, at the Council, a discussion arose on the next recipient of the Gold Medal—it was soon after the establishment of the Wimbledon Rifle competitions—Burges suggested we should shoot for it. He was simply saturated with Gothic tradition and lore, and I remember being told a little story illustrating this by one of the people present when the incident occurred. A number of architects were visiting a country church, Burges amongst them, and he said to Octavius Hansard " I cannot quite see the detail of that moulding up there ; I wish you would sketch the profile of it for me. " He did so and gave it to Burges to look at, who said " I don't know what it is, but I am perfectly certain it is not that ! "

And there was Professor Kerr, a very able man, and one of the best speakers I ever heard. It may

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not be known to many here that Kerr was the author of a book which is not in our Library. It was called *The Neteleafe Discourses*, and if anybody hears of a copy I strongly advise him to buy it, because it contains many interesting and amusing skits on the things which used to go on in the old meeting room. There were William White, Charles Fowler, Henry Currey, Arthur Cates, a man with a somewhat forbidding exterior, but when you got within the rind which enclosed him you found him to be one of the kindest-hearted of men. He was an ideal chairman of committees. All his dogmatism vanished when he was in the chair; he gave every opportunity to the people who were speaking, and he carried the business through in a manner which we might very well emulate now. Many other names occur to me, and each of them, I suppose, to most of those I see around me to-night, is merely *nominis umbra*; they were men of high integrity in their profession, who did their best to promote the interests of the Institute.

I happen to have in my possession a very interesting record of those early days. It is a photograph of a drawing made by Phené Spiers, bearing the title "An Excitement at the R.I.B.A." It is a very clever sketch; many of the likenesses are extremely close, and I certainly thought that the Institute must have a copy of it. But when I asked the Librarian he said he believed there had been a copy at one time but it had not been visible for many years. As I think this little sketch is well worth framing and preserving, I ask you to be good enough to accept it for the Institute and to keep it among your archives.

Before I sit down I would like to say a word or two to the younger generation of architects whom I see around me. Mr. Gotch has told us that we have, in this old Institute of ours, a goodly heritage. It is approaching its centenary, but its future, gentlemen, lies in your hands, to make or mar. In a body like ours there must be differences of opinion, and I would pray you to remember that the Institute as a whole is bigger than any of its parts or than any parties of its members. It looks, perhaps, to-day as if we were approaching the safe haven of—no! I will not let any words escape me which might savour of partisan shibboleths. May I say that we hope in the early future it may be said of this Institute that "None is for party, but all are for the State"? If we approach our difficulties and our differences in that spirit, I am confident that, as the Institute has a past full of high ideals, noble aspirations and honourable traditions, so the future will be one of increasing usefulness, wider activities, and greater prosperity. May I conclude, in the words of the old school toast: "*Floreat domus et esto perpetua!*"

Mr. WILLIAM WOODWARD [F.]: Mr. John Slater can go back a very little time before my own experience of this Institute. Seeing in this room to-

night such men as Mr. Slater and my old friend Mr. Maurice B. Adams, I took the trouble to look at the *Kalendar*, to find out on what dates they, respectively, became members of the Institute. But before I say anything further, may I congratulate Mr. Gotch on the very interesting paper he has read to-night? I thought I knew a great deal about the Royal Institute, but he has told us of a number of little matters which had escaped me, although I have been a diligent student of the work of the Royal Institute.

I find that Mr. Slater became an Associate in 1879, and that Mr. Colcutt became a Fellow in the same year; that Mr. Atkin-Berry became an Associate in 1879, and I became an Associate in that year too. Whether or not we had an idea that there would soon be an entrance examination I do not know, but that was the year when the examination was instituted.

Mr. Gotch has reminded us that in those years the Associates had not a vote. I agree with all that Mr. Slater said about the room upstairs, and I would like to go back to it for the meetings. Mr. Roe, Mr. Julian, Mr. Langston, Mr. Monckton and myself determined we would have a vote, and we got it. Formerly we had been allowed to listen to the speeches, and even to speak, but not to vote. I very well remember Professor Kerr, Octavius Hansard and William White, the church architect. And I perfectly well remember, desirous as I was—and still am—of saying something at the meetings, that if Kerr and Hansard and White were in the room, I knew it was all up with my chance of having a word. They would talk for weeks, if it were allowed, instead of hours.

I have seen and heard every President of this Institute from Sir William Tite, in 1870, down to the gentleman who now so worthily occupies the presidential chair, Mr. Paul Waterhouse. I remember William Henry White, Charles Eastlake, and the Cockerells. Mr. Northover has sent to me—because he was an executor of William Henry White—a letter I wrote in 1886—which runs as follows:

"DEAR MR. WHITE,—Thank you for the cutting which you returned to me.

"At the moment I do not see that I could do more than I have *re* the Metropolitan Board; some say that I have done enough in the direction of Spring Gardens, for the present at all events.

"I must be allowed to congratulate you on your well-written letters to *The Times* on the subject of Royal Academic Architectural Education. They should have been followed up by others from some of the so-called leaders of the profession—and instead of Mr. George Aitchison writing to *The British Architect* that you wrote the letters without the authority, etc., of the R.I.B.A., he should have written to *The Times* notwithstanding the position he holds at the R.A.—sup-

porting the views you so well stated: but really I am often disgusted at the want of spirit and pluck shown by the profession. They either from indifference or downright ignorance—mostly the latter—let anything pass except their 5 per cent., and if the growing tendency to take work out of the architects' hands and put it into those of the builders and upholsterers continues, and gradually the architect disappears, the architects have themselves chiefly to blame.

"If there is anything said at the R.I.B.A. when we meet about your letters you may count on the support of—Yours very truly, WM. WOODWARD."

It is a delight to go over these reminiscences. Mr. Slater has mentioned name after name of men I knew, among others my old master, Arthur Cates, of whom he has given a complete portrait. He was one of the kindest-hearted men who ever lived, but, if you did not know him, apparently one of the most austere.

I trust this Institute will proceed on the lines which Mr. Slater has mentioned, and I feel that, fifty years hence, it will have merited all the encomiums which Mr. Gotch has bestowed on it for its work during the first half-century of the R.I.B.A.

Mr. MAURICE B. ADAMS [F.]: The unexpected often happens, but Mr. Gotch surprised me by going back to the Septuagint in reviewing the Institute's springtide. It is not quite easy to apply the Biblical text at the head of his Paper concerning "Rich men living peaceably in their own habitations," because architects are not proverbially rich or placid folk. Records show that our Alma Mater has not always proved to be a "peaceable habitation." Family affairs in Conduit Street are occasionally distraught by differences of opinion, perhaps not about riches or balances at the bank. But disputations add to the zest of life and afford perhaps some relief from the mundane monotony of existence.

No mention is made in the very comprehensive Paper with which we have been favoured to-night of a circumstance incidental to the first fifty years of the R.I.B.A. The reason for this omission is probably owing to this matter being in a sense extraneous to our household accounts. I allude to the continued refusal of certain eminent architects to join our chartered Society. Some thought this exclusive habit arose from an air of superiority; others said "Architecture is an art and not a profession, nor a trade union." Be that as it may, among those who thus held aloof a few subsequently relaxed to some extent by accepting the R.I.B.A. Gold Medal. William Butterfield, however, with spartan relentlessness, received his decoration by deputy. William Burges, as Mr. Slater told us, said "the medal ought to be shot for by the Artists' Corps." If my memory is not at fault there was always more or less a comic side to these annual functions.

Draughtsmanship of the Victorian period is now al-

luded to as "a convention," and it has become the fashion to disparage it as out of date. No apology is needed for such thorough and sincere work. Pugin initiated the movement and distinction was added by the masterly directness of the pen and ink drawings of G. E. Street, in the heyday of the Gothic revival. So much has been said upon architectural drawing that little remains to be added about the subject in this place. However, the remarks recently made by Professor Rothenstein call for a few words in respect to the drawings of Norman Shaw, to whom I owe so much. The lecturer told us that, good artist as Shaw was, his perspectives "would scarcely be recognised by a student of art to be contemporaneous with the work of Watts, Burne-Jones or William Morris." Let me remind "students of Art," in order properly to estimate the particular quality of architectural draughtsmanship and contemporary illustrations generally at that time, it is essential to recognise what happened when copper engraving, woodblocks for publication and lithography gave place to the camera. In 1871 photolithography ousted transfer lithography, drawing on the stone and wood engraving. The transformation thus brought about was almost immediate and architects soon learned to produce pen and ink line drawings which could be reproduced direct to any required size by camera reduction. No longer was the intervention of the wood engraver or the lithographic draughtsman a necessity; consequently the technique of architectural detail was insured. Of course there were poor draughtsmen then as now. The main point I wish to emphasise is that limitations had to be observed because the photolithographic process required a distinct handling and style of execution owing to the need of well-defined outlines, coupled with a moderate use of cross hatching for tones, tints or shadows and for surroundings to the picture, because triangular or acute V-shaped interspaces were liable to clog up in printing off copies. The early seventies clearly show the limitations of photolithography which has been superseded by line process zinc blocks. In the first volumes of Blackburn's *Academy Notes* you will see that oil paintings and water-colours had to be redrawn in black and white line for process reproduction. Nowadays, drawings of all sorts and sizes are copied readily, so that draughtsmen observe no restraint and indulge in extravagancies under the claim of "texture." Sloppy, unworkmanlike work is consequently encouraged. Line drawing among architects has gone out of fashion, and not a single pen and ink example is hung this year in the Architectural Room of the Royal Academy. Formerly Academy rules excluded coloured exhibits by architects, only black and white drawings being permitted.

Before concluding, I notice that Mr. Gotch referred to the days when the Institute published no TRANSACTIONS and when there were no professional journals,

no reports of papers of that period being preserved, and I seriously direct attention to the urgent need of an up-to-date handy catalogue of our unique Library and Collection of Drawings, apart from the catalogue in the Library, which is kept up to date. I am not unmindful of the expense but am sure the money would be well spent. We cannot afford to be parsimonious over so obvious an obligation to our status and to our members. A grant made now by the Council would probably enable such a catalogue to be produced by the end of the year. At present the only available handy list of architectural books is that produced in 1909 by the joint Society of Manchester Architects of the volumes of this class in Manchester and Salford. It is far from complete, of course. Catalogues of works and manuscripts in the R.I.B.A. Library were printed in 1838, 1846, and 1865. Supplements appeared in 1871, 1874, 1877, and 1899. The current catalogue treasured by our older members was published in 1888, at the sole cost of David Brandon who, on resigning office as Senior Vice-President in 1885, made a donation of £320; therefore this useful "Brandon Donation" catalogue marks the end of the period described for us by Mr. Gotch. This can still be purchased with the 1899 Supplement. In the meantime annual supplementary detached lists have appeared, except during the war. They are too casual and get lost; and, besides, the majority of our subscribers possess no previous catalogue to which to attach these yearly instalments. The value of the Library is not appreciated and the whole thing is most unsatisfactory. I speak from experience; the need of a catalogue, such as members of the Institute ought to have on their bookshelves for constant reference is obvious.

THE PRESIDENT: My period of reminiscence is just clear of the time-limit allowed to-night, so I shall not burden you with stories about the Institute. We have had a delightful evening, and the reminiscences of old friends of the Institute have added to our enjoyment of it. In addition to putting the vote of thanks to the meeting I should like to thank Mr. Gotch personally for the great pleasure he has given us.

MR. GOTCH: I have to thank you for the very kind way in which you have listened to this record of the past. There is nothing very exciting in it, though I can assure you it has required a good deal of worry and time to search out the records. But, after all, as Shakespeare says, "A jest's prosperity lies in the ear of him that hears it; never in the tongue of him that makes it," and so it is with the Paper I have given to-night. I thank you very much for the way in which you have listened to it.

Review

THE ORIGIN OF THE CRUCIFORM PLAN OF CAIRENE MADRASAS. By K. A. C. Creswell [Hon. A.R.I.B.A.]. Reprinted from the *Bulletin de l'Institut français d'archéologie orientale*. Cairo. 1922.

When the Royal Institute of British Architects elected Mr. K. A. C. Creswell an Honorary Associate, his name was probably only known to those who have made a study of the Muhammadan architecture of the Near East. The present publication adds to his reputation as a painstaking and erudite writer in this field, and illustrates his careful methods of research. His *Brief Chronology of the Muhammadan Monuments of Egypt* was a remarkable production for anyone who was not originally trained as an architect or an archaeologist (indeed, any trained architect or archaeologist might be proud to have compiled so valuable a record), and he now embarks on a new venture in this closely reasoned theory of the origin of the cruciform plan of the Cairene madrasa, illustrated not only by admirable photographs of his own taking, but also by a series of accurate plans, measured and drawn by himself, of a very interesting series of buildings.

A madrasa is a theological college or school, where are taught one or more of the four "doctrines" of Islam. The first madrasas were founded in India early in the eleventh century. Gradually these schools spread westward, reaching Syria early in the twelfth century. They were introduced into Egypt by Saladin, and represent the only non-military buildings of importance due to that great soldier, though his fortresses are familiar enough. Hitherto it has been accepted by all writers on Saracenic architecture that the typical Egyptian madrasa was cruciform in plan, that the four liwans or recesses opening from the *sahn* (or central open court) each accommodated a class studying one of the four Islamic "doctrines," and that this cruciform plan came to Cairo (where it culminated in the magnificent fourteenth-century madrasa of Sultan Hasan) from Syria. This view was held not only by Lane-Poole, Herz, and other writers, but also by Professor van Berchem, who up to the time of his recent death had probably devoted more labour to the chronology of this architecture than any living writer. However, Mr. Creswell states (in a footnote on p. 45) that, just before his death, Professor van Berchem was convinced that this theory was unsound and was enabled by Mr. Creswell's logic to accept the latter's new point of view, to which the present study is devoted.

Summarised briefly, his argument is as follows. Of eight madrasas built in Syria before 1260, none now has, or could have had, four great liwans round a square central court or *sahn*. (This statement is borne out

by careful descriptions of the eight buildings in question, and illustrated by photographs and original plans, which are the more valuable because particulars of these madrasas in Aleppo have not been available in print hitherto.) Most of them had one liwan only, the rest had two. But all had a *masjid* or collegiate chapel, and quite early one also finds a mausoleum included. Then follows a list of early madrasas in Damascus, showing that none were arranged for four "rites" or "doctrines." Other lists, for Aleppo, Jerusalem, and Cairo, support the same conclusion. The Salihyah madrasa in Cairo (begun in 1243) was the first to accommodate all four "rites" but was not cruciform. Another was erected in Baghdad a few years earlier, to which the same applies. The Zahiriyah madrasa (1262-3) in Cairo was the first on a cruciform plan, but did not accommodate the four "rites." The Mansuriyah madrasa (1285) in Cairo, built by Qalaun, has only one liwan, and it is not until we reach the Nasiriyah madrasa (1295-1304) in Cairo that we find the cruciform plan used by all four doctrines. Moreover, of the long list of Cairene madrasas built during the following century, only one, the famous madrasa of Sultan Hasan (1356-63, illustrated in my paper on *Saracenic Architecture* published in this JOURNAL early in 1921), has this so-called "typical" plan. "The result of our investigation therefore is that, although the first four-rite madrasa is found at Baghdad, the first madrasa of cruciform plan is found in Cairo; that the cruciform plan was Egyptian in origin and that it is practically unknown outside Egypt."

This is his main point, but he also suggests a possible origin for the two-liwan plan in the fact that the early teachers of Islam, especially in Damascus, were accustomed to instruct their pupils in their own houses (*i.e.* the teachers' houses) which had two rooms opening from a central court. In Cairo the typical madrasa had a minaret, but not in Syria. Finally he attacks with great gusto what he calls the "Christian architect myth," by which any remarkable success of a Muhammadan architect is ascribed to some Christian prisoner or slave, and he suggests a possible explanation of the Gothic detail in parts of the madrasa of Sultan Hasan by reminding us of the strength of Crusader influence in the previous century.

The work is well annotated, with copious references, and is very free from misprints, though on p. 4 "analogous" is incorrectly spelt, and "Baghdad" is rendered in two different ways on pp. 35 and 43 respectively. Mr. Creswell has justified his election as an Honorary Associate by this work, for it is to those outside our profession who are advancing our knowledge of architecture that this honour should be awarded.

MARTIN S. BRIGGS [F.]

The Library

PORTFOLIO OF ILLUSTRATIONS OF WORK BY C. E. MALLOWS.

Consists of a series of beautiful drawings by the late C. E. Mallows, reproduced from back numbers of *Academy Architecture*. Some of these are of buildings designed by himself, others are competition perspectives for other architects. All display his mastery of line and his skill in delineating both architectural subjects and landscapes, and many illustrate his charming garden-architecture. M. S. B.

MECHANICK EXERCISES: OR THE DOCTRINE OF HANDY-WORKS: Applied to the Arts of Smithing, Joinery, Carpentry, Turning, Bricklayery. The Third Edition. By Joseph Moxon, F.R.S. London, 1703.

This is a manual of building construction of the time of Wren, and as such is a valuable contribution to our Library, which is scantily supplied with works of this character. It includes a number of engravings of various constructional details, tools, etc. The latter part of the book consists of an appendix, with the following amusing title:—

*"Mechanick Dyalling
Teaching
Any Man; tho' of an Ordinary Capacity
and unlearned in the Mathematicks
to Draw a True
Sun-Dial
on any
Given Plane
However Scituated
Only with the help of a straight Rule
and a pair of Compasses; and without any
Arithmetical Calculation."*

We always think of Wren as a man very learned in the "Mathematicks," but it appears that even in his day architects and craftsmen—men of "an ordinary capacity"—welcomed a manual that involved no "arithmetical calculation."

M. S. B.

THE LONDON BUILDING ACTS, 1894-1921. With a copious index, notes, cross references, legal decisions and diagrams; also the by-laws and regulations. Edited by Bernard Dicksee, F.R.I.B.A. 80. Lond., 1922. 7s. 6d. [Edward Stanford, Ltd.]

A useful book supplemental to the author's 1908 edition, bringing the information on the Acts up to date, with a digest of law cases. C. E. S.

PORTES MODERNES: ARCHITECTURE—FERRONERIE—SCULPTURE. Par E. Rumler. 40. Paris. £1 8s. [Librairie de la Construction Moderne, 13, Rue Bonaparte, Paris.]

An interesting collection showing how successfully French architects adapt their historic styles and the unsatisfactory results when they try to be original. C. E. S.

A GUIDE TO ENGLISH GOTHIC ARCHITECTURE. By S. Gardner. 40. Cambridge, 1922. 16s. [Cambridge University Press.]

This is a new edition of a work published some 30 years ago, principally for the use of public school boys, and, while admirably adapted to that purpose, likely to be very useful to professed architectural students if only for the author's beautiful photographs. These, while avoiding hackneyed subjects and points of view, are thoroughly representative of the best English work. The author appears not to have abandoned the Ruskinian dictum that all was decay and decline after the early fourteenth century, a position held by few lovers of Gothic to-day.

W. H. W.

Annual Dinner

The Annual Dinner of the Institute was held on Wednesday, 24 May, at Prince's Restaurant, Piccadilly, W. The President, Mr. Paul Waterhouse, was in the chair. Among the guests present were:—

The Rt. Hon. H. A. L. Fisher, P.C., M.P., President of the Board of Education; the Rt. Hon. Lord Justice Younger; Sir Aston Webb, K.C.V.O., C.B., President of the Royal Academy; Lieut.-General Sir George Macdonogh, K.C.B., K.C.M.G., Adjutant-General to the Forces; the Very Rev. W. R. Inge, D.D., Dean of St. Paul's; Major H. J. de Courcy Moore, Sheriff of London; Mr. G. Mills McKay, Sheriff of London; Monsieur A. Louvet, Président de la Société des Architectes Diplômés par le Gouvernement; Sir Anthony Bowlby, K.C.B., K.C.M.G., K.C.V.O., President of the Royal College of Surgeons; Mr. G. W. Lawrence, J.P., the Mayor of Westminster; Dr. H. S. Hele-Shaw, President of the Institution of Mechanical Engineers; Mr. W. B. Worthington, President of the Institution of Civil Engineers; Mr. J. S. Highfield, President of the Institution of Electrical Engineers; Mr. J. H. Blizard, President of the Institute of Sanitary Engineers; Mr. Edwin J. Sadgrove, President of the Society of Architects; Mr. E. Fiander Etchells, President of the Concrete Institute; Mr. J. Storrs, President of the Institute of Builders; Mr. James S. Motion, President of the Auctioneers' and Estate Agents' Institute; Sir Philip Magnus, Bart., M.P.; Sir Amherst Selby-Bigge, K.C.B., Permanent Secretary of the Board of Education; Sir Sydney Olivier, K.C.M.G.; Sir Alfred Hopkinson, K.C.; Sir Hercules Read, President of the Society of Antiquaries; Monsieur Alphonse Richardière, Vice-Président de la Société Centrale des Architectes Français; Mr. Frank Dicksee, R.A.; Mr. W. Cash, President of the Institute of Chartered Accountants; Mr. E. S. Beal, C.C., Master of the Plumbers' Company; Major-General H. F. Thuillier, C.B., C.M.G., Commandant, School of Military Engineering, Chatham; Mr. W. G. Newton, M.C., President of the Architectural Association; Sir Charles T. Ruthen, O.B.E., Director-General of Housing; Sir James Carmichael, K.B.E.; Sir Philip Pilditch, M.P.; Mr. J. W. Lorden, M.P.; Sir Percy Simmons, K.C.V.O.; Mr. G. Topham Forrest, Architect to the L.C.C.; Mr. G. Spencer Watson, Prime Warden of the Saddlers' Company.

There were also the following guests and members present:—

Mr. Maurice B. Adams, Prof. S. D. Adshead (Vice-President R.I.B.A.), Mr. G. P. Allen, Mr. W. H. Ansell, *The Architect*, *The Architects' Journal*, Mr. H. V. Ashley, Mr. Algernon Aspinall, C.M.G., Mr. H. Woodward Aston, Sir Frank Baines, C.B.E., M.V.O., Major Harry Barnes, M.P., Mr. Gilbert Bayes, Mr. R. F. Bayford, Mr. T. P. Bennett, Lieut.-Colonel A. W. Brewill, D.S.O., Mr. Charles H. Brightliff, *The British Architect*, Sir Thomas Brock, Mr. W. L. Trant Brown, *The Builder*, *The Building News*, Mr. W. J. M. Burton, Mr. C. McArthur Butler (Secretary, Society of Architects), *Central News*, Mr. Harold B. Challen, Mr. H. A. Chapman, Mr. Roland B. Chessum (President, London Master Builders' Association), Mr. John Clack, Mr. Sidney C. Clark, Mr. Cyril Cocking, Mr. G. Scott Cockrill, Mr. A. O. Collard, Mr. W. H. Collin, Mr. E. Bernard Cook, Rt. Hon. Sir Joseph Cook, Major H. C. Corlette, Mr. C. Cope Cornford, Rt. Hon. the Earl of Crawford and Balcarres, Mr. H. B. Creswell, Mr. W. E. Vernon Crompton, *The Daily Telegraph*, Mr. Charles A. Daubney, Mr. W. R. Davidge, Mr. A. H. Davies, Mr. Arthur J. Davis, Mr. C. F. W. Dening, Mr. Guy F. Denys, Mr. A. Dewing, Mr. A. Kirkwood Dodds, Mr. L. G. Ekins, Councillor Geo. Elmer, Mr. W. M. Epps, Mr. A. H. Fawke, Mr. E. J.

Fawke, Mr. T. Phillips Figgis, Sir Banister Fletcher, Mr. H. M. Fletcher, Major C. B. Flockton, Mr. A. J. Forsdike, Mr. T. O. Foster, Mr. Bernard Francis, Mr. Percival M. Fraser, Mr. D. T. Fyfe, Mr. C. Lovett Gill, Mr. Sydney Gordon, Mr. Harold Goslett, Mr. J. Alfred Gotch (President, Northants A.A.), Mr. Lionel U. Grace, Mr. W. Curtis Green, Mr. Walter Green, Mr. T. J. Gueritte, Mr. Josiah Gunton, Mr. W. H. Gunton, Mr. Edwin T. Hall, Mr. J. Dudley Hall, Mr. E. Stanley Hall, Mr. H. Austen Hall, Mr. J. Percy Hall, Mr. Stanley H. Hamp, Mr. E. Vincent Harris, O.B.E., Mr. Arthur B. Hayward, Mr. C. J. Heffer, Mr. George Hicks, Mr. Joseph Hill, Prof. A. M. Hind (Slade Professor, Oxford), Mr. G. D. Hornblower, O.B.E., Mr. George Hornblower, Mr. Charles St. J. Hornby, M.A., Mr. A. A. Hudson, K.C., Mr. E. Hudson, Mr. A. A. Hughes, Mr. T. Jenkins, Mr. Francis Jones, Mr. J. W. Jordan, Mr. A. Joyner, Mr. William Keay, Mr. Arthur Keen (Hon. Secretary), Sir Duncan Kerly, K.C., Mr. Henry N. Kerr (President, District Surveyors' Association), Mr. H. E. Knott, Mr. Ralph Knott, Mr. H. Cart de Lafontaine (Master of the Horners' Company), Lieut.-Colonel P. Cart de Lafontaine, Mr. Malcolm Laing, Mr. W. R. M. Lamb, Major N. Leslie, Major R. Lloyd-George, Mr. C. W. Long, Mr. R. T. Longden, Mr. Henry Lovegrove, Mr. T. Geoffrey Lucas, Sir Edwin L. Lutyens, Mr. A. G. R. Mackenzie, Rt. Hon. Lord Muir Mackenzie, Mr. J. McLachlan, Mr. Fred May, Mr. Percy W. Meredith, Mr. A. A. Messer, Mr. A. C. Meston, Rt. Hon. the Earl of Middleton, Mr. T. R. Milburn (President, Northern A.A.), Mr. W. Milburn, Mr. F. A. Minter, Mr. G. Mitchell, Mr. G. B. Mitchell (President, Aberdeen Society of Architects), Rt. Hon. Sir Alfred Mond, Mr. Greville Montgomery, *The Morning Post*, Mr. Arthur G. Morrice, Mr. Alan E. Munby (President of York and E. Yorkshire Architectural Society), Mr. J. Murrey, Mr. G. E. Nield, Mr. Nield, jun., Mr. D. Barclay Niven, Mr. F. T. Parnment, Mr. Herbert Passmore, Mr. G. L. Pepler, Mr. W. G. Perring, M.P., Mr. J. Peters, Mr. H. G. Picehurst, Mr. F. W. Pomeroy, R.A., Mr. E. Turner Powell, Sir Ambrose Poynter, Bart., Mr. W. T. Plume (Hon. A.R.I.B.A.), Mr. A. N. Prentice, *The Press Association*, Mr. E. G. Price, Mr. Stanley C. Ramsey, Mr. Walter Reynolds, L.C.C., Mr. W. E. Riley, Mr. G. Leonard Russell, Mr. F. G. Rye, Mr. R. Sanderson, Mr. W. Gillbee Scott, Mr. H. D. Searles-Wood (Vice-President, R.I.B.A.), Sir William L. Selfe, K.B., Mr. Herbert Shepherd, Mr. Leslie Shingleton, Mr. E. Simmons, Mr. John W. Simpson, Mr. Einer Skjold, Mr. John Slater, Mr. E. Whitney Smith, Prof. R. Elsey Smith, Mr. Roger T. Smith, Mr. A. E. Strong, Major Swindells, Mr. C. J. Tait, Mr. E. J. Tanner, Mr. Walter Tupper, Mr. Bateman B. Tarring, Mr. Sydney Tatchell, Mr. Percy Thomas (President, S. Wales Institute of Architects), *The Times*, Mr. C. Trollope, Mr. Lawrence A. Turner, Mr. F. W. Tyler, Mr. James W. Tyler, Mr. James E. Ward, Major-General Sir Fabian Ware, K.B.E., Mr. Edward P. Warren, P.S.A. (President, Berks, Bucks, and Oxon A.A.), Sir Alfred Watson, K.C.B. (President, Institute of Actuaries), Mr. Herbert A. Welch, *The Westminster Gazette*, Mr. Frederick Whinney, Mr. H. C. D. Whinney, Mr. T. B. Whinney, Mr. G. Wilkins, Mr. F. R. Gould Wills, Mr. C. J. Wilson, Mr. Denis Wilson, Mr. Geoffrey C. Wilson, Mr. Needham Wilson, Mr. Frank Woodward, Mr. William Woodward, Mr. F. R. Yerbury (Secretary, the Architectural Association), Mr. E. A. Young, Mr. Ian MacAlister (Secretary, R.I.B.A.), and members of the staff.

The Rt. Hon. H. A. L. FISHER (President of the Board of Education), proposing the toast of "The Arts," said he was speaking in the place and in the character of a very distinguished statesman, Lord Middleton, and he (the speaker) asked himself what Lord Middleton would

have said upon that occasion. As a member of the hereditary branch of the Legislature, he would have undoubtedly prefaced his observations by reminding them that Bolshevism was fatal, Socialism injurious, and Democracy perilous to the life of the arts. He would have reminded them that while architects built houses, peers of the realm lived in them; that while painters painted pictures, peers of the realm bought them. Passing from those considerations, in recalling his experiences as Secretary of State for India, Lord Midleton would have commented, in adverse terms, upon the absence of an Oriental section in the National Gallery. He would have reminded the audience that India had an art, China had an art, Japan, even, had an art; and, finding himself in the presence of such a great authority as the President of the Royal Academy, he would have ventured to suggest that some means should have been taken to remedy that position. Then he would have recalled his brilliant past as Secretary of State for War, and would have reminded them of the famous picture in the present Royal Academy exhibiting the deterioration of military millinery from the point of view of the fine arts. He would have associated himself with the policy advocated by the Secretary of State for the Colonies in the matter of reverting to garments in the familiar red. Speaking as a connoisseur of the arts, he would undoubtedly, after careful comparison of the claims of poetry, oratory, architecture and painting, have come down on the side of architecture. He would have reminded them that the architect was fortunate because he lived in two worlds—he lived in a world of business and in the realm of beauty and ideals. On the one hand, they could tell at a glance the cost of a house. Their estimates were invariably exact and close to the provisional anticipation. On the other hand, they followed their own fancy. They embodied in material form the aspirations of different classes of society, different races, different epochs; and whereas forms of art might rapidly perish and pass away, the architect had always his consolation in the relative durability of the structures which he erected. Finally, Lord Midleton would have addressed them as an Oxford man, and in that capacity he would undoubtedly have quoted from the Greek philosopher, Aristotle, and have given them the sobering reflection that while the architect was undoubtedly the most skilled deviser of houses, the best critic of houses was the person who was condemned to live in them. It was a great privilege for him (the speaker) to be able to propose that toast. After all, art was an essential ingredient in sound education, and it was a great pleasure to associate the toast with the name of the distinguished architect, Sir Aston Webb. They knew him as one of the most accomplished architects of their age and country, and as the President of that great society which brought before the mind and imagination of British people the ideal of the beautiful in life.

Sir ASTON WEBB [F.] (President of the Royal Academy), responding, said he had a very difficult task in undertaking to give in about five minutes a condensed account of art in a temperature of what height he did not know. First of all he must thank Mr. Fisher for what he had said in reference to architecture. Mr. Fisher had a wonderful imagination, and had been able to tell them

not only what he wished to say himself, but also everything that Lord Midleton would have said. Architects had to give estimates for houses, and he thought as a rule they did it very well; sometimes the estimates might be more than the final cost, sometimes they might be less—they could never be quite sure what it would be. Architects were, of course, much obliged to the public for living in the houses architects built—that was a delicate compliment that he always appreciated, for the more houses the public wanted the better for architects. Owing to circumstances over which our architects had no control whatever, building was in a very bad state at the present time. With regard to art, that was a very large question. There was a certain number of people to whom art seemed to be instinctive, and therefore it was quite unnecessary for him to say anything about art to them; there was also a certain number of people to whom art seemed to be nothing at all, and therefore it seemed quite unnecessary to say anything on the subject to them. It came to this: that there were very few people to whom it was worth while saying anything at all about art! Art was one of those things one could not talk about. To the true artist who had made a study of his craft and knew it thoroughly the work he did in a day gave him much more happiness than the dinner he ate at night. To the lover of art, art came as a silent and profound influence. Artists had certain qualities which must be born in them—they must have enthusiasm, they must have a sense of mystery and of power and of colour—and if they had not those qualities no power on earth could endow them with them. On the other hand, the qualities some artists have could be increased and enlarged and strengthened and rectified by education, and it was in that direction that the Royal Institute of British Architects and the art schools were useful in endeavouring to help men to make most use of the qualifications with which Nature had happily endowed them. Art, if it was to live, must be idealistic and realistic. The ideal side of art must come from the artist's own inner consciousness and feeling. The realistic side must come from knowledge, and, therefore, education was essential. There was an idea that artists lived a life by themselves, and had not much in common with other people, but no mistake could be greater. Many of the great artists in the past were great men of the world, such as Leonardo da Vinci, Lord Leighton, and others. In the midst of the strife at the end of the eighteenth century the artists of France made and prepared a plan for the defence and beautification of Paris, and when Paris was reconstructed in the middle of the last century that plan was made use of. In 1914, when the war broke out, what did the artists of this country do? They all enlisted at once, and hardly a student was left in the art schools. The R.I.B.A. used the services of those who were left, and made one of the finest surveys of London, which, in his opinion, was the finest civic survey ever made up to the present time—he was extremely sorry it had never been finished; it was so nearly finished, it would be a magnificent thing to complete it and hand it over to the authorities. The London Society prepared a plan for the arterial roads out of London; that plan was completed, and after the war, when unemployment was rife, the authorities turned to that plan and a large number of arterial roads were now

actually being carried out. The number of young artists who went abroad should also be remembered. The Royal Academy Schools lost 35 young fellows; the Architectural Association Schools lost 90; the R.I.B.A. lost 230 from its membership and students; the Artists' Rifles lost over 2,000, and Lord Cavan, when unveiling the memorial to that regiment at the Royal Academy the other day, said there was no record finer than that of the Artists' Rifles. It was only right that it should be known what artists had done during the war. If in any war there was ever an ideal it was the last war, which was fought for the ideal of protecting a people who could not protect themselves, the ideal of right against might. Artists should always look towards their ideals and strive to get as near them as possible; they would then do something for art and be happier themselves, and perhaps one or two geniuses might do something that would touch the world.

Sir ALFRED HOPKINSON, K.C., in proposing the toast of "The Royal Institute of British Architects," said, after seeing many cities abroad, he thought on his return what a fine city London had become. In his college days he thought what a fine city Oxford was, but when he was there last the High Street looked more beautiful than ever, largely owing to the work of members of the Institute. Those things spoke for themselves. He knew the great work the Institute had done, especially in the direction of education and in the training of young men to follow in the footsteps of the great architects of the present. One of the things which made life tolerable was the neglect of conventional duties, and the beauty of old age was that it did not matter too straws whether one neglected one's duties or not. After referring to the work of the President of the Institute, he said there were two characteristics which he hoped would always be borne in mind by the members of the profession. The first qualification for an architect was adaptability, or an ability to supply the client with what he wanted—not to thrust the highest art upon the client, but to give him what he wanted. The second necessary characteristic was not to be misled by clients who said "Now we have got what we want, make it grand for us." A great building was a thing which would exist for all time, and would appeal to future generations. He had recently heard St. Mark's referred to as the apotheosis of commercialism, but it was the commercialism of those who had the greatest and richest gifts. That was the kind of thing he hoped would govern the great works now being produced. Architects had the opportunity of producing things which would be seen by posterity, an opportunity which was denied to those who practised in the law; the works of the architect would be a record for all time, and that was one of the factors which made the profession of the architect so much to be envied. In conclusion, he referred to the works of the late Alfred Waterhouse and of the President of the Institute.

The PRESIDENT, in responding to the toast, said he was a whole-hearted Institute man. When he spoke of the Institute he spoke entirely with prejudice. The Civil Engineers had a prize called the Hawksley Prize, and one of the conditions was that it should be judged by the President of the Institution of Civil Engineers and by the President of the R.I.B.A. The idea of the prize was not to teach young engineers how to make a thing look archi-

tectural, but to encourage them to compete with one another in producing those elements of beauty which arose from pure construction treated poetically. They could not too warmly recognise the spirit of that prize. At the moment it appeared that the students had not fully realised its significance, but he hoped the President of the Institute of Civil Engineers and himself might be able to give them some instruction which would enable them to work on rather different lines.

He knew there were many men who thought that the Institute was of no use whatever. He had had an opportunity lately of seeing something of architects abroad, and some of them had said to him that an institute or society of architects was a thing which was of no use in theory, and in practice it broke down; that in their particular town it was run by a clique of men for their own ends—they took all the advantages. But there was more in it than that. If anyone in that room thought the R.I.B.A. was a clique, let him come in and see what it was like. He (the speaker) wondered if anybody valued what they were doing in the way of education. During his association with the Institute, and particularly during the time he was chairman of the Board of Architectural Education, he had obtained a great insight into the work of the Institute. It was getting to be a big thing. It was a proud day for them to think that very nearly all the architectural schools in the country within their reach were willingly subscribing to the conditions which the Institute made as to the entrance of students to associateship. In their competitions they did incalculable service to the members of the craft as well as to the members of the public. He urged them to think of their power of public expression as an Institute. A great many of them had been asked from time to time by their clients and members of the public if they could give advice as to whether they were to save their money for a further fall in prices. He was aware that many of his friends were very anxious to make a public expression on the point; it was dangerous to prophesy, but it was never dangerous to give an honest opinion. The conclusion which he had come to, and to which he knew nearly all of them subscribed, was that, wise as the public had been in reserving their money during the past year, the time was closely at hand when the liberation of that money would be a wise policy on their part, although no one could guarantee that there would not be a further fall in prices. There had been great falls already, and there was a further fall of 2d. per hour in the wages of the operatives coming next month. After making eulogistic references to Mr. Arthur Keen, the Hon. Secretary of the Institute, and to Mr. MacAlister, Mr. Waterhouse briefly referred to unification. Let them be unified that evening. It was of vast importance, and he was not putting it aside. In conclusion, he emphasised the importance of the Institute.

Mr. JOHN SLATER [F.] proposed the toast of "The Guests," and referred to the position and achievements of some of those present that evening, all of whom he cordially welcomed on behalf of the Institute. He specially mentioned the presence of Monsieur Louvet, to whom he addressed a few words in French. From the time when it held its first dinner, about 80 years ago, the

Royal Institute had, he said, always been noted for its hospitality.

The Rt. Hon. Lord Justice YOUNGER and the DEAN OF ST. PAUL'S (Dr. Inge) responded to the toast.

Monsieur A. Louvet, Président de la Société des Architectes Diplômés par le Gouvernement, responded as follows :—

Je suis heureux de vous apporter aujourd'hui le salut cordial de la S.A.D.G.

Je désire tout d'abord vous remercier du grand honneur que vous m'avez fait, à moi et à la Société, en me nommant l'année dernière membre correspondant de votre illustre compagnie.

Il y a quelques jours seulement plusieurs des vôtres étaient à Paris pour la réunion annuelle de l'Union Franco-Britannique des Architectes, notamment notre éminent confrère Simpson, qui a été élu Président de l'Union pour 1923, et l'infatigable Cart de Lafontaine. Ils ont pu vous dire combien nous avons été heureux de les revoir et de montrer avec eux au Directeur des Beaux Arts, les belles œuvres que nos confrères britanniques ont envoyées au Salon. Nous ne devons pas nous lasser de répéter combien est utile à l'Architecture, combien aussi est utile aux deux pays ces rapports que nous maintenons entre nos deux sociétés et qu'affirme l'Union récemment créée, mais préparée depuis si longtemps.

C'est la communauté d'idées, la fraternité dans l'action commune, qui nous a rapprochés davantage. C'est aussi une sympathie qui date de loin, comme je le rappelais au dîner de l'Union Franco-Britannique, voilà longtemps que nous faisons de l'enseignement mutuel. Nous avons beaucoup à apprendre chez vous, notamment dans l'architecture domestique, qu'il s'agisse de maisons d'ouvriers ou de châteaux—vous avez en cette matière un souci de la composition pratique, de l'élégante simplicité qui peut servir d'exemple. Ne pouvons-nous pas aussi vous être utile. Vous avez constaté l'effort considérable qui se fait en France pour l'aménagement de logements à bon marché et des cités-jardins.

Peut-être dans ces derniers avez vous un peu retrouvé l'architecture de votre pays. Vous avez pu constater aussi l'effort—je puis dire héroïque—que font nos confrères français pour la reconstitution des régions dévastées, malgré les énormes difficultés qui surgissent à chaque instant. C'est ce contact continu qui nous est utile, et, comme nous n'avons pas les mêmes qualités ni les mêmes défauts, nous pouvons nous compléter mutuellement. Nous parlerons aussi utilement des grandes questions qui intéressent l'enseignement de l'architecture. N'avons-nous pas été très fiers de voir à l'Architectural Association des ateliers organisés à peu près comme ceux de notre Ecole Nationale? La seule différence c'est qu'il y a plus de jeunes filles que chez nous et que l'on y prend le thé à quatre heures. Mais chez vous, comme chez nous, on travaille avec zèle—je pourrais presque dire, avec passion. Voilà toutes les raisons qui rendent utile la bonne entente entre nos grandes sociétés—celle que j'ai l'honneur de représenter est, vous le savez, une société vigoureuse, ardente—on l'appelle volontiers une "société de jeunes"—bien qu'elle compte

bien des têtes grises et même blanches. Mais elle cherche à conserver l'entrain de la jeunesse et elle suit avec intérêt les travaux des sociétés britanniques. D'accord avec les autres sociétés françaises qui sont unies en fédération, d'accord notamment avec la Société Centrale notre doyenne, représentée ce soir par mon ami Richardière, l'un de ses vice-présidents, nous continuerons à reserrer les liens qui nous unissent, et nous pouvons espérer que ces liens s'étendront un jour aux nations amies qui ont contribué à assurer la défense de la civilisation et de l'Art. Nous y trouverons le plus grand avantage et j'ajoute aussi le plus grand plaisir.

Mes chers confrères, au nom de la S.A.D.G., je porte la santé de votre président, notre éminent confrère, M. Waterhouse, de votre (ancien) vice-président M. John Slater et des membres de l'Institut Royal.

Rome Scholarships in Architecture

The scheme of competition for the Rome Scholarship in Architecture, offered by the Commissioners for the Exhibition of 1851, and for the Henry Jarvis Scholarship, offered by the Institute, has now been issued :—

The Rome Scholarship will be of the value of £250 per annum, and will be ordinarily tenable at the British School at Rome for three years. Candidates must be British subjects and less than 27 years of age* on 1 July 1923.

The Jarvis Studentship will be of the value of £250 per annum, and will be ordinarily tenable at the British School at Rome for two years. This studentship will be confined to Students or Associates of the R.I.B.A. (see section "B"), but otherwise the conditions for the two awards will be the same.

The competition, which will be conducted by the Faculty of Architecture of the British School at Rome, will be in two stages :—

A. A preliminary competition, open to approved candidates.

B. A final competition, open to not more than ten candidates selected from those competing in the preliminary competition.

Particulars of the general regulations governing the tenure of the Scholarships may be had on application to the Honorary General Secretary, 1 Lowther Gardens, Exhibition Road, S.W.7.

* Admission to compete may be granted at the absolute discretion of the Faculty to candidates over 27 years of age, provided they have spent in war service at least that number of years by which their age exceeds 27.

The Franco-British Union of Architects

SECOND ANNUAL CONFERENCE AND GENERAL MEETING IN PARIS.

By H. P. CART DE LAFONTAINE [A.], O.B.E., T.D., OFFICIER D'ACADÉMIE.

THE second annual conference and general meeting of the Union, which took place on 12 and 13 May in Paris, once again demonstrated the fact that the Union supplies a long-felt want in facilitating the exchange of ideas between French and British architects, and by enabling them to meet and discuss the problems of the day. The objects for which the Union was founded, as defined by its "Statuts," are to symbolise and strengthen the ties of friendship, uniting the architects of France and Great Britain, to improve personal and professional relations, and safeguard the interests of architects in both countries, to contribute to the advancement of architectural education and the progress of architecture, and to encourage French and British architects to render each other mutual assistance, and to provide a means of communication for that purpose.

The recent conference was a practical application of these principles, and owed much of its success to the policy adopted by the Bureau of limiting official business to one sitting. The only formal meeting was held on Friday, 12 May, when the following members were elected to form the Bureau for the next session, commencing on 1 October 1922:—

President, J. W. Simpson, F.R.I.B.A., Chevalier de la Légion d'Honneur, Membre correspondant de l'Institut, etc. Vice-President, J. Godefroy, Chevalier de la Légion d'Honneur, Architecte en Chef des Postes & Télégraphes, Hon. Member Architectural Association. Secretary-General, H. P. Cart de Lafontaine, O.B.E., T.D., Officier d'Académie, Membre correspondant S.A.D.G. Hon. Treasurer, J. M. Poupinel, Chevalier de la Légion d'Honneur, Hon. Corresponding member R.I.B.A.

British Committee.—Professor P. Abercrombie, M.A., Sir Reginald Blomfield, M.A., R.A., Litt.D., F.S.A., Officier Ordre de Leopold II., Membre correspondant S.A.D.G., Ferdinand Billerey, W. G. Newton, M.A., M.C., Membre correspondant S.A.D.G., A. N. Pater-son, M.A., A.R.S.A., Paul Waterhouse, M.A., F.S.A. (P.R.I.B.A.), Membre correspondant S.A.D.G. Hon. Secretary, Arthur J. Davis.

French Committee.—MM. André, Chevalier de la Légion d'Honneur, Chef d'Atelier à l'Ecole des Beaux Arts; Arnaud, Officier de la Légion d'Honneur, Professeur de construction à l'Ecole Centrale et à l'Ecole des Beaux Arts; Bonnier, Officier de la Légion d'Honneur, Inspecteur Général des Services d'Architecture et d'Esthétique de la Préfecture de la Seine, Hon. Corresponding member R.I.B.A., Defrasse, Chevalier de la Légion d'Honneur, Architecte en Chef des Bâti-ments Civils and Palais Nationaux, Architecte de la

Banque de France, Grand Prix de Rome; Richardière, Vice-President de la Société centrale; Thoumy, Officier de la Légion d'Honneur, Architecte en Chef des Bâti-ments Civils, Commissaire Général de la Société des Artistes Français; Hon. Secretary, A. Schneider, Secrétaire Général S.A.D.G.

The names of the following members elected since the last General Meeting were read:—

British Section.—S. D. Adshead, Herbert Baker, F. Billerey, H. C. Bradshaw, M. Chaurès, T. E. Cooper, E. G. Dawber, C. A. Farey, H. M. Fletcher, J. G. S. Gibson, J. Keppie, H. V. Lanchester, Sir E. L. Lutyens, L. de Soissons, R. Unwin, E. P. Warren, M. E. Webb, H. Worthington, P. Worthington, T. P. Bennet, B. Cox, J. S. Forbes, H. A. Hall, S. Hamp, J. Murray, T. S. Tait, J. D. Tate.

French Section.—MM. Arvidson, Blanchard, Chaussemiche, Chretien-Lalanne, Coutan, Danis, Déglane, Duquesne, Devienne, Febvre, Formigé père, Formigé fils, J., Héraud, Hébrard, Jalabert, Hulot, J., Lamaizière, Legros, Lisch, Mewès, Nor-mand, Roussi, Templier.

An amendment to the "Statuts" was passed admit-ting to honorary membership persons of distinction who are not architects, and it was decided to invite His Majesty the King and the President of the French Re-public to become Honorary Presidents; and to invite the following to become Honorary Members of the Union: His Excellency the French Ambassador in Great Britain; His Excellency the British Ambassador in France; M. Leon Bérard, Ministre de l'Instruction Publique et des Beaux Arts; M. Paul Léon, membre de l'Institut, Directeur des Beaux Arts; the Rt. Hon. Earl Balfour of Whittinghame, K.G., P.C.; the Rt. Hon. the Earl of Crawford and Balcarres, K.T., P.C.

At the conclusion of the meeting delegates were en-tertained to tea by the Société des Architectes Di-plomés, and later an informal visit was made to M. André's atelier at the Ecole des Beaux Arts. An excel-lent programme of visits and social functions had been arranged by the French committee, including visits to two small housing schemes, a visit to the Château and Parc at Versailles, and to the Salon, and terminating with an informal dinner.

The first of these visits took place, in unfavourable weather conditions, on Friday morning, but in spite of the rain there was much of interest in the housing schemes promoted by the Office Départementale des Habitations à Bon Marché at "Les Lilas" and at Drancy. These, and some other small schemes in the suburbs of Paris, are not part of a large plan but have been put in hand to provide for the immediate needs of housing in the industrial districts. The layout and the planning of the houses, which are in blocks of two, four or—in one or two cases (as at "Les Lilas")—six

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houses, owe much to the housing and town planning schemes which have been carried out in England. MM. Pelletier and Teisseire, the joint architects of the scheme at "Les Lilas," explained that owing to the high price of the land, which covers an area of about 16 acres, the number of houses to the hectare was about 30 (or 12 to the acre), the average size of the house (living room, parlour and three bedrooms) was about £600. These are constructed of coke-breeze blocks with cavity walls.

The scheme at Drancy, planned by MM. Bassompierre and de Rulle, provides accommodation for employées of the Ceinture Railway, is well laid out, and the plans of the blocks of houses are attractive and interesting. In this scheme a brick treatment has been adopted and the elevations are simple and pleasing. M. Bassompierre, who took the party round and explained the details of the scheme, had some interesting details to give and told us that in the later houses a cellar had been added to provide extra storage accommodation, as this was found to be necessary. At the end of each pair of gardens a brick fowl-house has been built, in order to prevent the erection of insanitary and untidy sheds. One was particularly struck, even in the smallest "Unité," consisting of bedroom, living room and scullery, with the spotless cleanliness and neatness of the houses already in occupation. An interesting feature of this scheme is the large "Co-operative" store, with a large meeting room over, which is nearing completion.

On Saturday a visit was made, in perfect weather, to the Château and Parc de Versailles. M. Chaussemiche, the Architect and Curator of the Palais, explained many interesting points and showed us some of the new discoveries of rooms transformed by Louis Philippe which are being restored, and parts of the vast building which are not open to the public. The British members and their ladies were afterwards entertained by the President and Council of the Société des Architectes Diplômés, to luncheon at the Restaurant de la Flotille, in the park. On the return to the station a rapid visit was made to the Grand Trianon, the theatre, etc. The next item on our programme for a rather busy day was the official visit to the Salon des Artistes Français. The party was received at the Grand Palais by M. Nénot, Membre de l'Institut, Président du Jury, Section d'Architecture, and M. Thoumy, Commissaire Général de la Société des Artistes Français; the British members were presented to M. Paul Léon, Directeur des Beaux Arts, who inspected the British exhibits and subsequently visited the galleries in which the French work is shown. The party then adjourned to the Salle des Conférences, for a "conférence" on "L'Architecture Anglaise." M. Léon (who took the chair) expressed his appreciation of the fine work of the British artists they had just seen, and said it gave him great pleasure to be present as the representative of his government at such an interesting meeting between

architects of France and Great Britain. He concluded by asking Mr. Simpson to read his paper on "L'Architecture Anglaise."

Mr. John W. Simpson, who spoke in French, in the course of his paper said it was manifestly impossible to consider anything but a small fragment of the subject. He would therefore adopt the method of the geologist and detach a chip from the rock, which they would examine so that they might learn something of its character. He would try and explain the development of the plan of the country house as being perhaps the most characteristic feature of their architecture. The lecturer then traced the growth of the plan of a modern country house from its origin in the common hall with its dependencies, and, on the proposition of M. Louvet, Président of the Union, was accorded a hearty vote of thanks for his paper.

The programme of the meeting terminated with an informal dinner at which the British delegates were the guests of the Société des Architectes Diplômés, and which took place on Saturday evening at the Restaurant des Centraux.

M. Louvet proposed the toast of the King and the President of the French Republic, and read the following message from His Majesty, the company remaining standing:

"Au Président de l'Union Franco-Britannique des Architectes, Paris,

"Le Roi me commande de vous transmettre, ainsi qu'aux membres de l'Union Franco-Britannique des Architectes, ses chaleureux remerciements pour votre aimable message, en exprimant, ses meilleurs souhaits pour le succès de votre société.

"PRIVATE SECRETARY."

M. Louvet then addressed a few words of welcome to the British members and referred to the work of the Union and its usefulness in promoting cordial relations between architects of the two countries.

Mr. J. W. Simpson thanked the President for the cordial welcome which had been given to British members by their French colleagues, and referred to the pleasant relations that had existed between architects of France and England for many years. He had no doubt the Union would continue and extend this friendship, and English architects hoped to welcome a number of their French confrères at the meeting in London next year.

M. Paul Léon, who proposed the toast of the Franco-British Union of Architects, said that England and France seemed naturally destined to close friendship, being only separated by a shallow depression in the earth's surface, so unimportant that if Notre Dame was sunk in the Channel the top of the towers would still be visible. He thought the Union had great opportunities for cementing this entente; artists were disinterested missionaries, and because of

this they would be listened to in their mission of goodwill. They had had that afternoon an opportunity of seeing the admirable work of their British colleagues at the Salon, and they appreciated the high artistic qualities shown by these drawings. He sometimes felt that it was to be regretted that in public exhibitions more models were not shown. The work of an architect, which was a composition in solids, would, he thought, be better appreciated by the public if illustrated in this way; it would also tend to increase the public interest in their art by making it easier to understand. They had seen at the Salon an interesting section devoted to decoration but he thought they would agree the first of the decorators should be the architect.

Mr. Arthur J. Davis also made a short speech, in which he expressed the appreciation of British architects for the work and great traditions of their French colleagues.

This brought the proceedings to a close and the English members bade their hosts a cordial "Au revoir" until the next meeting in London.

Public Lectures on Architecture

Two of the series of five public lectures arranged by the Literature Committee have already been held before good audiences. Mr. Halsey Ricardo gave the first lecture on 18 May, on "The Value of Public Opinion" from an architectural standpoint; Professor Ernest A. Gardner followed on 25 May with a paper on "Greek Public Buildings," which was illustrated by a large number of lantern slides. It is hoped to publish both lectures in full in the JOURNAL. The following résumé of Professor Gardner's has been received from Mr. W. H. Ansell [A.] :—

Professor Gardner described the general appearance of the Greek city. The older cities, he said, consisted of narrow streets, lined by unimpressive houses having no windows facing the street. All were simple, unostentatious, bearing great resemblance one to the other.

The well-known dictum of Demosthenes was quoted: "While for the state the heroes of old erected such buildings and set up such works of art as posterity has never been able to surpass, yet in private life they were so simple and moderate that if anyone looks at the house of Aristides or Miltiades he will see that it was in no wise more pretentious than its neighbours." The truth was that the social life of the Greek city was mostly lived in the open air or the public buildings. The Greek spent his days in the agora, the gymnasium or the theatre. It was on these buildings, and, of course, on his temples, that the Greek employed his genius for architecture.

In the age of Alexander town-planning became a more orderly and stately thing, particularly in the cities of the Ionian coast of Asia Minor. The lecturer gave a detailed analysis of the planning of Priene, Pergamon and other cities, with slides of existing remains, and hypothetical restorations of their public buildings. These were principally the porticoes surrounding the agora, the great altars and their precincts and enclosures, the libraries, theatres and stadia.

The Prytaneum, or town hall, and the Ecclesiasterion, or assembly chamber, were shown on the plan of Priene. Professor Gardner pointed out how the climate, giving on occasion brilliant sun and torrential rain, influenced the planning and arrangement of the public buildings. The open portico or colonnade surrounded all the markets, the altars, and many of the temple precincts. The planning of the Hellenistic city, seen for the first time by the conquering Roman, undoubtedly affected the later planning of the Roman cities. A description of the Arsenal at the Piræus and the Propylæa at Athens and elsewhere completed an interesting and scholarly lecture.

The remaining lectures and the dates on which they are to be delivered are as follows: 8 June, Mr. D. S. Maccoll, "What is Architectural Design"; 15 June, Professor C. H. Reilly, "Some London Streets and their Recent Buildings"; 21 June (Wednesday), "The Continuity of English Architecture." The lectures begin at 5 p.m.

ARCHITECTS' FEES AND QUEEN ANNE'S BOUNTY.

On the recommendation of the Practice Standing Committee, the Council of the Institute have decided to make representations to the Queen Anne's Bounty Office with regard to the fees paid to architects.

BUILDING BY-LAWS.

A deputation has been appointed by the Council to urge the Ministry of Health to extend the operation of Section 25 of the Housing and Town Planning Act of 1919 for a further period of at least 12 months.

WEBB'S DRAWINGS OF THE PALACE AT WHITEHALL.

Mr. Andrew Oliver [A.] writes: "With reference to Webb's drawings, Mr. Gotch contributed a paper, illustrated with about thirty of Webb's drawings, to the *Architectural Review* for June 1912, together with a list showing where the drawings may be found."

THE EMPIRE TIMBER EXHIBITION, 1920.

A quantity of surplus catalogues of the above exhibition are still available for disposal. Arrangements have been made with the Department of Overseas Trade for the sale of these catalogues at the R.I.B.A., 9, Conduit Street, W., where they can be obtained at the price of 2s. each (post free 2s. 4½d.).

Westminster Hall

METHODS OF EXTERMINATING THE WOOD-BORING BEETLE, *XESTOBIUM TESSELLATUM*

THE systematic survey of the roof of Westminster Hall by the Ancient Monuments Branch of His Majesty's Office of Works and Public Buildings in 1913 revealed the fact that by far the greater portion of the very serious decay in the timbers was due to the attack of a wood-boring beetle, whose ravages were first discovered by the personal examination of the roof by the present Director of Works, Sir Frank Baines, C.B.E., M.V.O.

The insect was identified by Dr. Gahan and others as *Xestobium Tesselatum*, one of the anobiid beetles.

The life history of the creature is still the subject of investigation, but it is known to undergo a complete metamorphosis through a larval stage, a chrysalis or pupal stage and then become the perfect beetle. It is believed that the larval stage, in which the white slightly curved grub is known as "wood-worm," is the period of the greatest destructive activity, when it bores through the oak with its hard, sharp jaws, forming a circular tunnel of approximately one-eighth of an inch diameter. The soft body of the grub is armed with minute horny pegs, directed out and backward, with which to press upon the sides and top of the bore-hole and give driving power to the jaws. When the larval stage is about to terminate, the grub directs his bore-hole towards the surface of the wood without actually piercing an opening, and lies down near the end of the tunnel for the duration of the chrysalis or pupal stage. On the emergence of the beetle from the chrysalis, the bore hole is completed to the outer air, and, after drying and hardening, the beetle is now complete and commences to call for a mate with the rhythmic tapping from which it derives its popular name of "death-watch." The call is produced by the beetle rising upon its front legs and rapidly dropping again until its jaws strike a sharp blow upon the surface of the wood. Eight or ten taps in quick succession compose the call. The eggs from which the grubs are hatched are laid in cracks and joints of the timber and this has caused some of the principal bearing joints of the roof to be most severely damaged. The grub's habit of working in the dark and not emerging through to the outside of the timber until completely transformed into the perfect beetle has led to the preservation of a sound-looking outer crust on beams whose interior is completely eaten away.

Dr. Maxwell Lefroy, of the Imperial College of Science, South Kensington, has taken the life history of the beetle into account in devising a chemical preparation for preserving the wood in future from its attacks, and had added a proportion of cedar-wood oil to the insecticide to keep the beetles, who seem to dislike its scent, from approaching to lay their eggs on the wood. In devising a suitable compound several limiting conditions were first laid down, which excluded the use of reagents that were highly inflammable or so poisonous as to involve serious risk to the workmen applying the preservative. The characteristic orange brown colour of the old timber was carefully preserved by the exclusion of any substance that had the effect of changing or darkening its hue.

The active principle of Dr. Lefroy's composition, tetrachlorethane, is a very powerful insecticide, but, unfortunately,

it is also capable of adversely affecting human beings, as it is a powerful liver poison. It had, therefore, to be diluted with other ingredients into a form in which it was reasonably safe to handle. After considerable experiment, both in the laboratory and in Westminster Hall, the formula was settled as follows:—

	Per cent.
Tetrachlorethane	50
Cedar-wood oil	6
Solvent soap	2
Paraffin wax	2
Trichlorethylene	40

The solvent soap holds the oil and renders the wood non-inflammable and the paraffin wax prevents chemical action. The trichlorethylene is a solvent and diluent for the tetrachlorethane and is itself a feeble insecticide.

Notwithstanding the considerable dilution of the principal ingredient, the resulting liquid and its volatile products were still regarded by the Home Office experts as poisonous, and the men applying the spray were required to wear approved gas-masks. Five of these "gasman's masks" were obtained from Messrs. Siebe, Gorman and Co., Westminster Bridge Road. They consist of a pneumatically sealed cover over the nose and mouth with back-pressure valve for the exhaled breath and a long india-rubber tube reaching to the external air. A canvas cap fitted over the operator's head keeps the cover for mouth and nose in position.

As the result of further experiment and the consideration of the actual spraying of the timbers, it was proposed, in October 1917, to substitute a non-poisonous solution. The active insecticide in this second solution was ortho-para-dichlorbenzene, which is even more deadly to the beetle than the first solution. Soap and cedar-wood oil were added to perform the same functions as before. The material was actually made up to the formula:—

	Per cent.
Ortho-para-dichlorbenzene	91
White Castille soap base	7
Cedar-wood oil	2

It was obtained from Messrs. Heppells, Insectox Laboratories, 2 and 6, Eden Street, Hampstead Road, N.W.

The method of applying the spray was the same for the second solution as the first, with the exception that the "gasman's masks" were only necessary to be used with the first solution. A thorough brushing away of dust and debris preceded the actual spraying operations, and dust lying in the bore-holes of the beetle—the excreta of the creature's digestive processes—was removed by air blast through a hose and spray nozzle. The container for the solution was used to produce this blast, but a vacuum cleaner would be efficient. The cleaning operation was of primary importance, as the penetration of the solution into the wood fibres might be very seriously diminished by a screen of dirt upon the surface of the timber. The time spent in cleaning generally exceeded that given up to the two coatings of spray afterwards applied.

WESTMINSTER HALL BEETLE
XESTOBIUM TESSELLATUM — *RAFOVILLOSCUM*



GRUB FEEDING



GRUB, TO SHOW HOW IT OBTAINS PRESSURE



GRUB FEEDING (about 3 times full size)



CHRYSALIS



BEETLE
 (Photograph made by Dr. Lefroy)



BEETLE

A ten-gallon container composed of acid-proof metal known as "virex alloy" was obtained from Messrs. Holder, Harriden and Co., Nobel House, 35, Nobel Street, Falcon Square, E.C.2. The container was mounted on an iron frame-work with a wheel and two legs and two handles, so that it could be wheeled or lifted from point to point about the scaffolds. It was fitted with a hand pump for working up an air-pressure of 120 lb. to the square inch and a pressure gauge graduated to measure up to that figure. A screw nozzle and tap allowed the hose for the discharge of the liquid to be attached near the bottom of the container, the hose itself being provided with another tap at the free end so that the spray could also be turned on or off by the operator directing it against the wood.

The proceedings were generally carried out in the following order:—

1. The portion of the timbers to be sprayed was cleaned and blown free from dust.
2. Nine gallons of the well-stirred solution were poured from the drum in which it was obtained from the manufacturer into the cylindrical container and the machine hauled up to the scaffold by the electric winch fitted on the floor of the Hall.
3. The two operators and those watching or assisting in the experiment arranged the air tubes of their "gas-man's masks" so that the air drew freely from a point outside the roof well out of the way of the fumes, and put on the head-pieces so as to cover their mouths and noses.

NOTE.—Masks only required with first solution containing tetrachlorethane.

4. The air-pressure, applied by means of the pump handle, was kept up at a pressure of from 20 to 60 lb. to the square inch by one operator who stood by the machine.
5. The other operator applied the nozzle of the hose to the wood and turned on the tap. The exact distance at which the nozzle was held from the wood varied to suit the size and position of the timbers being treated, but the spray was never allowed to fall from a distance upon the wood.

The object was to take advantage of the pressure to drive the liquid into the pores of the surface, and the nozzle of the hose was held as close as practicable without undue splashing and loss of the liquid.

Every part of the timber, new or old, was given at least two coats of the solution, or rather, was given two good soakings, for the spray was not discontinued until the surface had absorbed as much as it could hold and the solution was beginning to run and drip. Some difficulty was at first experienced in the spraying of the smaller parts of the open-work tracery, as the spray was liable to miss the wood and fall in a mist to the floor of the Hall. A special brush nozzle was made to meet this difficulty, and, as they became more experienced, the workmen also learned to adapt the ordinary nozzle for use on these parts. As the liquid ran through the hose the pressure steadily declined until the gauge indicated 20 lb. to the square inch, when the cocks were turned off and the pressure pumped up again to 60 lb.

As both the first (poisonous) solution and the second (or non-poisonous) gave off a pungent smelling vapour, it was found necessary to choose a time for the spraying work when few people would be actually in the Hall or the adjoining parts of the House of Commons.

Colour in Building

By HALSEY RICARDO [F.].

The annual revival of colour in London, in our squares and parks, due to the vernal ministration of nature, should suggest to us how much, by means of paint, colour wash and permanent coloured building materials, we might relieve the sombre appearance—in winter, and indeed throughout the year—of the city in which most of us have to spend our lives. I am told that in Magdeburg the inhabitants, smarting under the criticism of the dulness of their town, are busied now in brightening their churches, public buildings and houses with gay colouring, in order to please their aesthetic sense and to remove the reproach they are unwilling to suffer any longer.

We might do well to accept such an inspiring lead. There are many stucco-faced buildings in London which have to be periodically repainted, and what is required is, not that each tenant should colour his individual strip of house-front according to his fancy and the terms of his lease, but in co-operation with his neighbours treat the terrace, block of buildings and architectural composition as an entity, and so restore the original architectural conception of the group of buildings, designed as such.

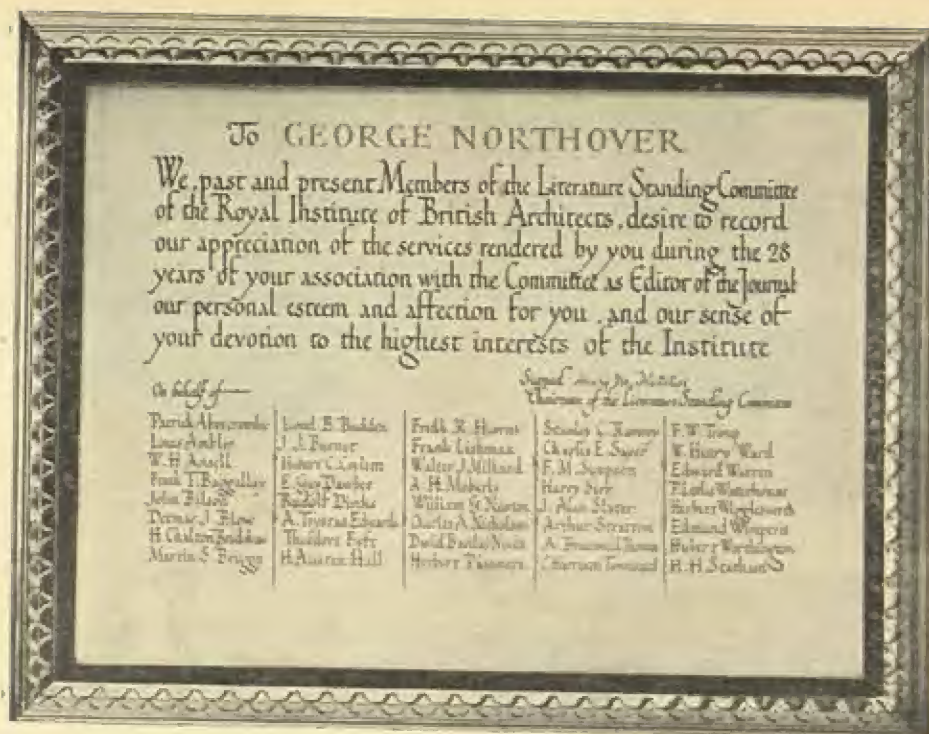
Even where the building has no relation to its adjuncts, much might be done to give a pleasing reaction from the dingy, usually timid, prevailing treatment by the house-painter.

A particularly interesting movement in this direction was inaugurated by the recent competition held under the auspices of the R.I.B.A. An anonymous donor offered £200 in prizes for the best treatment in coloured materials of a supposed business frontage in a London street. This offer had a most gallant and instructive response, and the schemes, 170 in number, had been on view at the Galleries of the R.I.B.A. It is hoped that the exhibition will have had the effect of stimulating the public to take an interest in a matter that really concerns it far more intrinsically than it is inclined to suspect and through habit and the numbing effect of past conventions to realise.

ELECTRIC LIGHTING, HEATING, ETC.

The Council have decided to arrange for the holding of a joint meeting between the Royal Institute and the Institution of Electrical Engineers for the purpose of discussing papers on the use of electricity for the lighting and heating of buildings and for domestic purposes.

Messrs. Paul and Michael Waterhouse have made a donation of £21 to the Architects' Benevolent Society.



Testimonial to Mr. Northover

ON Thursday, 25 May, the Front Library was the scene of a pleasant little ceremony, when Mr. Northover was presented by past and present members of the Literature Committee with a testimonial in token of his 28 years' association with the Committee as Editor of the JOURNAL. The testimonial was written on vellum by Mr. Macdonald Gill, the inscription in black, the name "George Northover" in gold, and the names of the signatories in red; the gilt and ebony frame was made by Mr. Joseph Armitage.

The Chairman, Mr. H. M. Fletcher, in making the presentation, said that they had got Mr. Northover there to tell him what they thought of him, a process which his modesty would make more interesting to them than to him. Twenty-eight years was time enough to lay the foundation of a solid friendship, and those who had worked with him would think of him often in his well-earned retirement. They would think of him as of one who hid his attainments under a thick bushel of modesty—an editor who raised the JOURNAL to the position which it holds. They would think of the heavy burden he bore during the war as temporary Secretary of the Institute, and would remember the earlier work, such as the Transactions of the Town Planning Conference in 1910, which he carried out so ably. These were some of the reasons why those who subscribed their names had done so, not with consent, but with enthusiasm.

Mr. Harrison Townsend, as one of the oldest members of the Committee, referred to the long and pleasant association which he had had with Mr. Northover, and to the devotion which he had always shown to the Institute.

Mr. Northover, in the course of his reply, said:—

"When I first came to the Institute—now going on for 29 years—among my scheduled duties was 'attendance at all meetings of the Literature Committee.' One usually finds on this Committee Institute Essay Medallists, authors of notable architectural books, authors of sessional papers, and of other important communications to the Transactions. Most of the members of the Institute who have made their mark in architectural literature have been at one time or another members of the Committee. To be associated with so distinguished a body was a privilege I have always been very deeply sensible of, and, needless to say, it has been of infinite value to me in the conduct of the JOURNAL. I owe my very grateful acknowledgments to the many members of the Committee who have given the JOURNAL the benefit of their scholarly erudition and literary talent.

"He is a candle, the better part burnt out," said one of Shakespeare's characters. This description fits exactly the retired man. Still, I admit that 'the cool, sequester'd vale of life' I have entered is not without its amenities. To me the most precious of these is the recollection I have of the agreeable relations that have always existed between the members of the Institute and myself. The kindly courtesy I have invariably received from members has made it a real pleasure to serve them. This precious testimony, enshrined in this beautiful writing, will be among my most cherished possessions, a perpetual source of pride and gratification to me and my home circle."

Allied Societies

LIVERPOOL ARCHITECTURAL SOCIETY.

The President, Vice-president and members of Council of the Liverpool Council have been elected for the ensuing year of office as follows:—

President—Gilbert W. Fraser, F.R.I.B.A. *Vice-presidents*—Prof. L. P. Abercrombie, M.A., A.R.I.B.A.; W. Glen Dobie, A.R.I.B.A. *Honorary Secretaries*—Ernest Gee, A.R.I.B.A.; Felix Holt, A.R.I.B.A. *Members of Council—Fellows*: Hastwell Grayson, M.A., F.R.I.B.A.; Richard Holt; T. T. Rees, F.R.I.B.A., F.S.I.; Arnold Thornely, F.R.I.B.A.; E. P. Hinde, F.R.I.B.A.; Edmund B. Kirby, F.R.I.B.A.; Prof. C. H. Reilly, M.A., F.R.I.B.A.; *Associates*: E. L. Bower, A.R.I.B.A.; H. A. Dod, M.A., A.R.I.B.A.

BERKS, BUCKS AND OXON ARCHITECTURAL ASSOCIATION.

The Second Annual Meeting of the above Association was held at Oxford on Saturday, 20 May.

The following members were elected for the ensuing year of office:—

President—E. P. Warren, Esq., F.S.A., F.R.I.B.A. *Vice-presidents*—H. S. Rogers, M.A. (Oxon); C. S. Smith [F.], Berks; H. Passmore [A.], Bucks. *Hon. Auditor*—R. A. Rix [A.]. *Hon. Treasurer*—T. T. Cumming [A.]. *Hon. Secretary*—H. Hutt [A.].

The Annual report and balance sheet were adopted, and the President delivered an address which will be published in *extenso* in the Year Book. The Association has 125 members, and is to be congratulated on its rapid growth and successful work.

Architectural Association

THE HOUSE LIST.

The A.A. Council's nominations for the House List for the Session 1922-23 are as follows:—

President—Mr. Stanley Hump, F.R.I.B.A. *Vice-Presidents*—Messrs. L. S. Sullivan, A.R.I.B.A., and Gilbert H. Jenkins, Lic.R.I.B.A.

Honorary Treasurer—Mr. E. Stanley Hall, M.A., F.R.I.B.A.

Honorary Editor—Mr. M. T. Waterhouse, A.R.I.B.A. *Honorary Librarian*—Mr. Manning Robertson, A.R.I.B.A.

Honorary Secretary—Mr. J. Alan Slater, M.A., A.R.I.B.A.

Ordinary Members of Council—Messrs. W. G. Newton, M.A., A.R.I.B.A. (Past President), H. Barnes, M.P., F.R.I.B.A., T. A. Darcy Braddell, A.R.I.B.A., M. J. Dawson, F.R.I.B.A., F. C. Eden, M.A., G. P. Fildes, A.R.I.B.A., H. S. Goodhart-Rendel, P. D. Hepworth, A.R.I.B.A., Oliver Hill, E. J. T. Lutyens, A.R.I.B.A., H. I. Merriman, A.R.I.B.A., A. H. Moberly, F.R.I.B.A., S. C. Ramsey, F.R.I.B.A., A. B. Ll. Roberts, A.R.I.B.A., H. A. Saul, F.R.I.B.A., T. S. Tait, F.R.I.B.A., M. J. Tapper, A.R.I.B.A., Philip Tilden, C. Cowles-Voysey, A.R.I.B.A., T. M. Wilson, F.R.I.B.A., and G. G. Wornum, A.R.I.B.A.

Prizes and Studentships

HENRY SAXON SNELL PRIZE.

To the Editor, JOURNAL R.I.B.A.,—

SIR,—I desire to draw the attention of your readers to the subject set for this prize for the current year—viz., "A Maternity Home and Infant Welfare Centre." In the cause of social progress these institutions are bound to have an importance in the future which is as yet little realised. Although a comparatively small number of specially designed buildings have been erected (and these are to some extent tentative), most Health Authorities have established Homes, if only in converted premises. In due course properly designed buildings will be required all over the country, and those architects who have made a study of the subject may well hope to reap the benefit. In this connection the prize offers a good opportunity for at least the commencement of such a study, and it is hoped that many practising architects will enter as competitors. Indeed, this is much to be desired.

A memorandum setting forth in detail the requirements and also some information of buildings and writings for reference has been prepared and approved by the Board of Architectural Education. A copy of this will be sent to each competitor.

The monetary value of the prize has been raised this year to £60.—Yours faithfully,

A. SAXON SNELL.

BOARD OF ARCHITECTURAL EDUCATION.

R.I.B.A. HENRY SAXON SNELL PRIZE.

Owing to the generosity of Mr. A. Saxon Snell, the Henry Saxon Snell Prize has this year been increased by £10, bringing the value of the Prize to £60.

The subject set is a Maternity Home and Infant Welfare Centre. A memorandum setting forth the objects of such an institution and further particulars may be obtained, free of charge, from the Royal Institute.

EVERARD J. HAYNES,
Secretary to the Board.

R.I.B.A. STAFF.

Many members of the Institute will learn with regret of the death of Mr. W. H. Bond, who had been a member of the staff for the past twelve years. Mr. Bond served in the South African War, and subsequently in India and China. He was engaged at the Institute as a temporary assistant during the Town Planning Congress in 1910, and was afterwards retained on the staff as a clerk to the late Editor. Owing to his state of health, and greatly to his regret, he was unable to join the forces during the late war. He acted as Chief Clerk in the office during Mr. Baker's absence on war service. His frank and kindly nature endeared him to all his fellow workers.

Competitions

AUCKLAND WAR MEMORIAL.

The third and final set of Questions and Answers has been received, and is available for inspection in the Library.

DEWSBURY WAR MEMORIAL COMPETITION.

The President of the Royal Institute of British Architects has nominated Professor C. H. Reilly, O.B.E., F.R.I.B.A., as Assessor in this Competition.

LYTHAM PUBLIC HALL AND BATHS COMPETITION.

The President of the Royal Institute of British Architects has nominated Mr. Alfred W. S. Cross, Vice-President, R.I.B.A., as Assessor in this Competition.

IAN MACALISTER,
Secretary.

COMPETITIONS OPEN.

Auckland War Memorial.

Ipswich War Memorial.

The conditions and other documents relating to the above competitions may be consulted in the Library.

Members' Column

Members, Licentiate, and Students may insert announcements and make known their requirements in this column without charge. Communications must be addressed to the Editor, and be accompanied by the full name and address. Where anonymity is desired, box numbers will be given and answers forwarded.

NOTICE OF PARTNERSHIP.

Mr. W. H. Godwin having acquired from Messrs. Godwin, Browett, Riley & Smith the entire Practice carried on by them as Architects and Surveyors at Vicar Street, Kidderminster, and Load Street, Bewdley, has arranged a Partnership with the Firm of Messrs. Pritchard & Pritchard, Architects and Surveyors, Bank Buildings, Kidderminster.

The Amalgamated Practices will now be carried on under the style of Pritchard & Godwin, A.R.I.B.A., Architects and Surveyors, Bank Buildings, Kidderminster, and Load Street, Bewdley.

Tel.: 183 Kidderminster, 27 Bewdley.

PARTNERSHIP.

A.R.I.B.A. (31), desires to Purchase a Partnership in well-established practice, provinces preferred; or would take charge of, or commence, a provincial practice in connection with one already established in London. Eight years' varied experience, including two years' University architectural training, and Government Departmental work. War service.—Apply Box 2452, c/o Secretary R.I.B.A., 9 Conduit Street, London, W.1.

PARTNER wanted by architect (Licentiate) of 30 years' practice, London and country, principally domestic work. Offices Whitehall. Considerable work in prospect. Capital £200.—Apply Box 2423, c/o Secretary R.I.B.A., 9 Conduit Street, W.1.

WANTED, a young, energetic Partner, with small capital, to develop a practice established over ten years by an Associate in a country town on the South Coast.—Send full particulars as to age, qualifications, etc., to Box 3052, c/o Secretary R.I.B.A., 9 Conduit Street, London, W.1.

MESSRS. ADAMS, BROAD & CO.

JOHN ADAMS, Architect, of Montevideo, Uruguay, has taken into partnership Mr. M. C. Broad, A.R.I.B.A., and Mr. C. S. Higgins, A.M.I.C.E., the firm to be known as Adams, Broad & Co.

MR. BERNARD DANGERFIELD.

Mr. BERNARD DANGERFIELD, M.C., A.R.I.B.A., is resigning his position as Assistant Architect, H.M. Office of Works, and is entering into practice with Mr. H. R. Coates, of Guelph, Ontario.

MESSRS. THOMS & WILKIE.

Messrs. THOMS & WILKIE have moved to new offices at 21 South Tay Street, Dundee (Telephone No. 1538 Dundee).

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EXPERIENCED practical Assistant, successful at Flat Conversions, Old Cottages, etc., good chances in hand waiting finance, or part time with other architect. Licentiate R.I.B.A.—D. W., 77 Belgrave Road, S.W.1.

APPOINTMENTS WANTED.

A.R.I.B.A. desires Post; accustomed to responsibility, design, working drawings, details, specifications and supervision; good London office refs.; young, capable and enthusiastic.—Apply Box 4315, c/o Secretary R.I.B.A., 9 Conduit Street, W.1.

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A.R.I.B.A., 28, urgently requires position as assistant. Working drawings, details, specifications, surveys. Experience in domestic, commercial, and church work. Excellent testimonials; neat and accurate draughtsman. Moderate salary. London or suburbs preferred.—Apply Box 2921, c/o Secretary R.I.B.A., 9 Conduit Street, W.1.

Minutes XVII

SESSION 1921-22.

At the Fourteenth General Meeting (Ordinary) of the Session 1921-22, held on Monday, 29 May 1922, at 8 p.m.—Mr. Paul Waterhouse, President, in the chair. The attendance book was signed by 18 Fellows (including 3 members of Council), 19 Associates (including 1 member of the Council), 4 Licentiates, and a considerable number of visitors.

The Minutes of the Meeting held on 15 May, having been published in the JOURNAL, were taken as read, confirmed and signed.

The Hon. Secretary announced the decease of the following members:—

Mr. John Eaglesham, elected Associate 1885.

Mr. David Christie, " Licentiate 1911.

Mr. John Jennison " " 1911.

Mr. A. V. de Souza " " 1911.

It was RESOLVED that the regrets of the Institute for the loss of these members be recorded on the Minutes of the Meeting, and that a message of sympathy and condolence be conveyed to their relatives.

The following members attending for the first time since their election were formally admitted by the President:—

Messrs. C. G. Butler and C. T. Pledge (Associates).

Mr. Wm. Harvey [J.] having read a paper entitled "Colour in Architecture," a discussion ensued, and on the motion of Professor Gerald Moirs (Hon. Associate), seconded by Mr. Halsey Ricardo [F.], a vote of thanks to Mr. Wm. Harvey was passed by acclamation, and was briefly responded to.

The proceedings closed at 10 p.m.

Arrangements have been made for the supply of the R.I.B.A. JOURNAL (post free) to members of the Allied Societies who are not members of the R.I.B.A. at a specially reduced subscription of 12s. a year. Those who wish to take advantage of this arrangement are requested to send their names to the Secretary of the R.I.B.A., 9, Conduit Street, W.1.

Dates of Publication.—1921: 12th, 26th November; 10th, 24th December. 1922: 14th, 28th January; 11th, 25th February; 11th, 25th March; 8th, 22nd April; 6th, 20th May; 3rd, 17th June; 15th July; 19th August; 23rd September; 21st October.



Colour in Architecture

By WILLIAM HARVEY, OWEN JONES STUDENT 1913

[Read before the Royal Institute of British Architects, Monday, 29 May 1922]

INVESTIGATION of the two aspects of colour and structure in architecture would form an interesting and ample field for a lifetime's study, and its enormous extent makes it peculiarly difficult to condense into an hour's lecture. More than that, the ground has already been tilled and the harvest reaped by no less a master than John Ruskin, whose book *The Stones of Venice*, is an elaborate treatise on the subject.

The book is a classic; and if it shares with other classic works the fate of being "praised and not read," that perhaps is due to the fact that Ruskin filled his pages so full of good things that it is difficult to avoid a sort of mental indigestion in attempting to absorb them.

The practice of design is much more a matter of the imitation of selected examples than an affair of the application of rational or religious principles; and however right Ruskin was in his spiritual analysis of certain elements of building, the good effect is dissipated by the practical difficulties in the course of interpretation from perfect theory to actual bricks and mortar. Modern buildings are designed in response to definitely practical ends and aims.

Structural honesty, combined with appropriate colour, should be kept in view in all architectural design, but it would be absurd to suppose that buildings are made merely to express true principles

of structure and colour. It is only when the general purpose, the convenience and economy of the building have been considered that these aspects of architecture begin to loom large in the field of vision. However the architect faces his problem, colour and structure will take their place in the finished building. He may be interested in structural problems and allow them to express themselves in his finished work—may, indeed, enlarge upon them and make them an integral part of its appeal as a work of art, or he may do all in his power to disguise the real structure with applied ornament unrelated to affairs of building. In a similar way, it is within the province of the architect to determine the colour of his buildings, to decide whether colour shall be considered at all, whether the cheapest or most convenient materials shall be used irrespective of their colour, or whether special attention shall be given to the selection of materials of intrinsically pleasing hues or of hues that have been found to take their place in the scheme without clashing under certain climatic conditions.

Over and above the possibilities inherent in the selection of sound building material of pleasant colour is the possibility of decoration by colour in the form of applied pigment, or by incrustation with marble, tiles, mosaic or metal.

All methods yield excellent results under suitable conditions, and this paper has been written,

not to advocate any particular application of colour, but to put together some facts in relation to the combination of structure and colour in architecture under different climatic circumstances.

In some way or another colour is bound up in the appearance of all architectural works, and when not formally invited it is rude enough to intrude its presence unasked. The colour of materials available at certain sites controls the finished effect of many works of architecture.

In both Jerusalem and Tiberias the same type of design is adhered to in the old domestic architecture; but whereas the one city, built of creamy limestone, is full of charming colour harmonies in relation to its surroundings, the architectural appearance of the smaller town is rendered dismal by the use of a local stone of sombre blue-black hue.

It is the misfortune of England at the present time that some of the most generally useful and economical bricks happen to possess a hard, unpleasant tint of pink, whilst bricks of a really beautiful colour can only be obtained at much greater cost. Fashion has something to do with our taste in bricks, and the only thing to steady our judgment is to ask ourselves whether the colour value of such and such a building material really goes well with the other things in the picture—the sky and clouds and foliage, if there is any in the neighbourhood.

Old London stock bricks, with their varied tints, including some black and red among the yellow, stand well under the grey skies and soot of London, and it is a pity that they were ever improved into dull uniformity. If anything, a little more variety would have improved them; and in the hands of architects who had an eye for colour they were given dressings of richer tint or banded with diagonals of vitrified headers.

There is one sure way of bringing out all the bad colour qualities of the cheap pink brick referred to, and that is to construct a long blank side wall of it with a front wall of better colour and texture designed with some pretence to architecture. When this is carried into execution, the detail on the front counts for nothing, it is bludgeoned out of existence by the shrieking conflict of colour on the side wall.

The natural colour of material is a matter of particular importance in an inclement and humid climate where colour added by the application of pigments is subjected to the severest possible tests. Where acid fumes, smoke and soot are present, the

whole colour question must be governed by these extraneous considerations. The only buildings in London that appear really comfortable are those which happen to wear their mantle of soot with dignity, and in estimating the colour value of a new architectural work in the Metropolis of the world it is necessary to ask oneself whether it will prove to be a good subject for the soot and acid treatment.

Cleaning the exterior of a building is only practicable in certain cases, and even with the application of the steam brush there is the risk of turning a dirty building into a shabby one. Given time, the rain and wind acting upon the soot may produce pleasant effects upon a good many building materials; and Sir Christopher Wren was singularly fortunate in choosing materials which would still be beautiful when seen in the murk of a far bigger and far dingier London than that in which he lived and worked. Until greyness can be banished from our skies, it is futile to hope for a successful chromatic scheme of really brilliant or primary hues in our buildings. It is a law of colour composition that balance of hues or tones must be observed throughout the design as a whole, and where the background of sky is impregnated with soot the objects in the foreground must partake of the same character or be out of key.

In artistic language, colour out of key is sometimes described as being "muddy" or "dirty," so that in London pure primary colours might have to be referred to as dirty, dirt being matter out of its place; and primary colours, however much we may love them, are out of their place in a dingy city.

That this is not only a matter of idle theory is evidenced by the depressing effect of the patches of bright colours introduced by the posters on our hoardings. The artistry displayed in individual posters is often of a notable order, but they cannot be considered as appropriate colour notes in the street architecture, since they do not harmonise either with the sky or with the colours of adjoining buildings. With competent supervision of the main effects of colour and arrangement, hoardings might become things of real beauty and instruction, not only in respect to the values of advertised commodities, but as concerns colour decoration.

England is a country of atmospheric effects involving on many days in the year subdued colours for all objects in the background and middle distance. A day in the middle of spring may have a sky veritably the colour of lead. The green of distant

grass and trees is overlaid with a similar gloom, and objects in the background, irrespective of their local colour, are toned down to a sort of depressing uniformity. It is the difficult business of the British architect to discover a colour scheme that will take its place against this background and still retain its interest.

When Ruskin wrote his vigorous denunciations of the architecture of his time, with its triglyphs and its swags, its sham pediments and its rage for stucco, it was not that he was oblivious to the possibilities of architectural expression by plastic art, by shapes and modelling, but that architecture had been made to exist only in the addition of sculptural details of columns and orders applied in accordance with Palladian rules and without any consideration for colour whatsoever.

Some few years earlier Owen Jones had been subjected to derision for expressing his belief that the ancient Greeks had employed pigments upon their columnar architecture. Later investigations and discoveries have proved his case up to the hilt, and every student of the present day knows that our Grecian architecture is but the bony frame of Grecian art without its bright complexion.

The architecture of Ancient Egypt was not considered a suitable subject for much imitation in England, and the fact of its bright colour was accepted without so much controversy.

Actually the Egyptians had an easier problem than the Greeks, thanks to their almost rainless climate; and given pigments of suitable chemical composition, there was little chance of rain washing them away. Sandstorms might blast them, however, and to guard against deterioration the strongest obtainable hues were employed.

Structure and colour went hand in hand in that nearly all permanent structures were considered fit for the display of colour, and the walls and ceilings, whether of rock-cut caves or stone-built cells, were arranged in simple surfaces on which colour would show to advantage.

When columns were introduced in the larger buildings to provide intermediate supports for the great stone slabs forming the roofs, the columns also were regarded as a field for colour, and in some cases their rounded surfaces were carved and painted with human figures in low relief, although the curvature of the shafts made strange effects of foreshortening in the picture work.

Other columns are made more appropriately to

represent the grouped stalks of reeds or flowers, but always with an eye to colour, for the stems and petals were painted in rich, conventional colours. Except in a few special features, cornices, capitals and statues in the round, the carving is generally kept very flat and subordinated to the applied colour. Each object drawn is surrounded by an incised outline, and the surface modelling is provided by gently softening down the edges of the pattern to the bottom of the surrounding groove with an almost imperceptible, but exquisitely adjusted, gradation of relief (Fig. 1).

The definite simple shapes of the architecture (which was built up with rough surfaces and carved to shape after erection) are such as might convey an impression of undue severity when seen in a photograph. Under their own blue sky, however, the biggest Egyptian buildings tend to become dwarfed and to appear trivial unless enough colour remains to give them scale and distinction. Without applied colour, the buildings seen in the light of a glaring sun merge into their background of sandy hills, which also reflect a glare of light and heat capable of rendering inconspicuous the largest masses of masonry.

The effect of size conveyed by great structures is very uncertain and deceptive. Everyone has heard, from his earliest years, of the enormous size of the Temple of Karnak, but it does not follow that the impression it creates will be one of great scale. The flood of light beating into the ruins through the broken portions of the roof entirely destroys the solemnity and scale of the Temple.

It is only when one reaches the primitive cells at the sanctuary end, some of which retain their slab roofs and blue-coloured ceilings, that the effect of the enormous blocks can be properly grasped. The colour has proved itself a necessity to the realisation of the size and dignity of the building. In these smaller cells the roof slabs seem enormous masses of stone 12 feet or so in length. It is only as a sort of afterthought that one realises that the lintels already passed in some of the outer courts and halls were three times as big and more than forty feet long.

The pure primary colours of the ancient architecture are absolutely in harmony with the landscape, where strong effects are the rule.

The sky stretches up and away for miles, like a wall of blue masonry smeared with a plaster of white light.

The scene at sunset, when the Fellahin march home with their beasts along the sunbeam paths drenched in golden dust, is a quaint sight. It seems far more ancient than the Pyramids, for the Pyramids have lost their outer coating of wrought masonry and colour decoration, and do not appear nearly so big as their dimensions would lead you to suppose. They have, by the way, a somewhat familiar reek of Hampstead Heath on Bank Holiday, if you allow yourself to look at them in that light, for they have become a playground for tourists and Arab guides. The conventional attitudes in which human beings are portrayed in ancient Egyptian sculptures and paintings, and which seem so quaint and unreal to an Englishman, have been explained by reference to some religious convention which kept the artist to a certain beaten track. There may be a great deal of truth in this religious explanation, but, in fact, the attitudes drawn in the sculptures hardly need much comment when seen in their own land. The nature of the country explains them automatically, and the sculptures which have appeared so stiff, forced and unnatural when seen in a European museum become recognisable as intensely naturalistic when viewed in the light of their own surroundings. Egypt is a mud flat intersected with artificially raised lines of embankment for paths and irrigation channels. Consequently, everyone walking along a path is seen in outline silhouetted against a sky of solid blue, and, with the exception of some details of costume, the present inhabitants look singularly like the sculptures. The resemblance is closest in the case of naked slaves working the shadoof and tilling the fields.

Another peculiarity of natural conditions in Egypt which affects artistry and the design of buildings in relation to structure and colour is that the dry air makes distant objects seem near. Blue-grey mists will not serve as a common formula for the background colour of the picture, for the colour in the far distance may be bright cream or pink. Aerial perspective, as we understand it in Europe, is either entirely absent or even reversed; the sun-dazzle sometimes making the foreground indistinct and leaving the background comparatively clear. Every object tells as a flat plaque of colour inlaid against the colours of neighbouring objects or against the sky, which although a light blue, looks just as solid as anything else in the landscape.

It will be shown later how these climatic conditions have encouraged certain forms of structure

and colour in Saracenic architecture, where the shapes of domes and minarets and of crested parapets have been designed to weave the colour of the sky into the architectural composition.

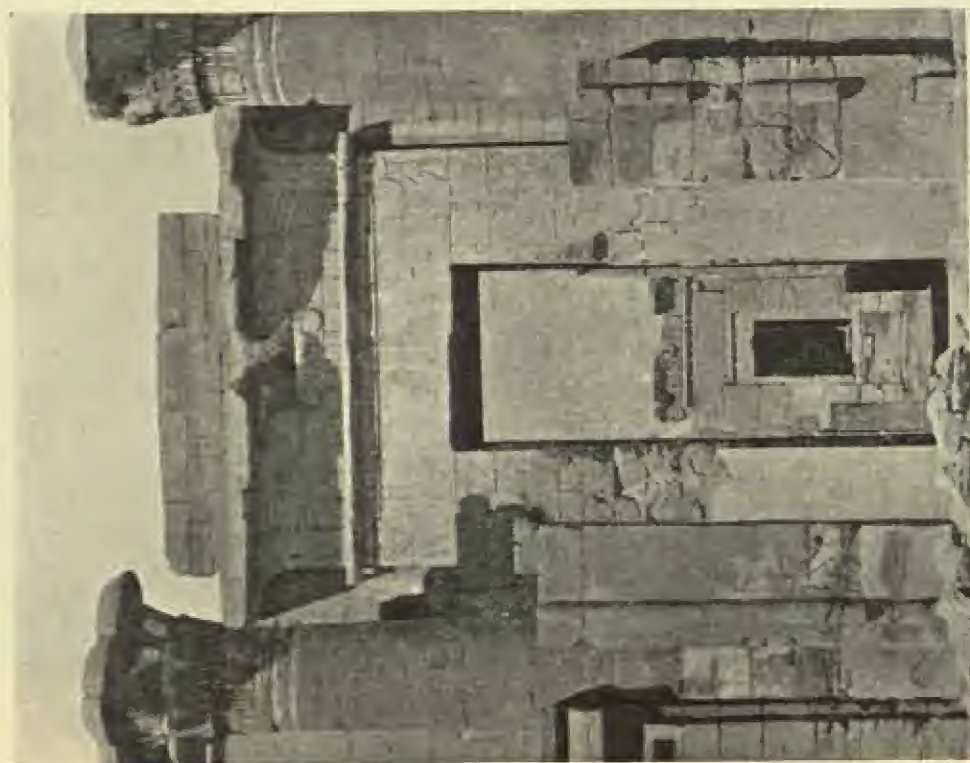
The stern, almost crude, effect conveyed by photographs of Egyptian buildings may be caused by the inability of the camera to depict faithfully the colour values of the shadows. Hot climate shadows are really soft and liquid things, in which the detail of the architecture is more easily seen than in the glaring sunlit portions of the building. The camera does not show things in this way, and makes the shadows heavy and black, as in a northern climate.

Suitable photographic plates and scientific exposure may do something to remedy this defect, but the amateur and the professional photographer in search of the picturesque generally get results which embody shadows far too black to convey the part played by colour in the architecture of Egypt. In Ancient Greece, as we of this generation know, the buildings and statues of solid marble were treated with a surface coating of pigment of the same pure and vigorous hues as had been used in Egypt. Owen Jones gives a list of primary colours, together with black, white and gold, as having been used in each country. Greece had not the same climate as Egypt, and can be horribly cold and wet in early spring. It has more cloud and mist to soften the distance, but brightness and light predominate and make the glare from white marble distinctly objectionable. Machine production is going ahead in Modern Greece, but the number of factory chimneys is not yet great enough to darken the air, though, to a sensitive mind, one may be enough to spoil the landscape.

In 1908 Athens possessed some beautiful examples of modern architecture with applied colour in the ancient manner. The Academy of Science and the University had both been treated with polychrome painting. This may have been retouched since the buildings were erected in 1837, but it certainly seemed agreeable when I saw it.

As a student of the British School at Athens, my work involved the examination of coloured ancient objects, and impressed upon me the fact that the ancient peoples of Greece had considered colour an essential of architectural expression.

The use of painting on ancient Greek architecture, where an inclement winter must have acted adversely to applied pigment, may have been en-



From a Photograph by William Harvey

FIG. 1.—TEMPLE OF MEDINET HABU, THEBES
Remains of painting on sculptured front

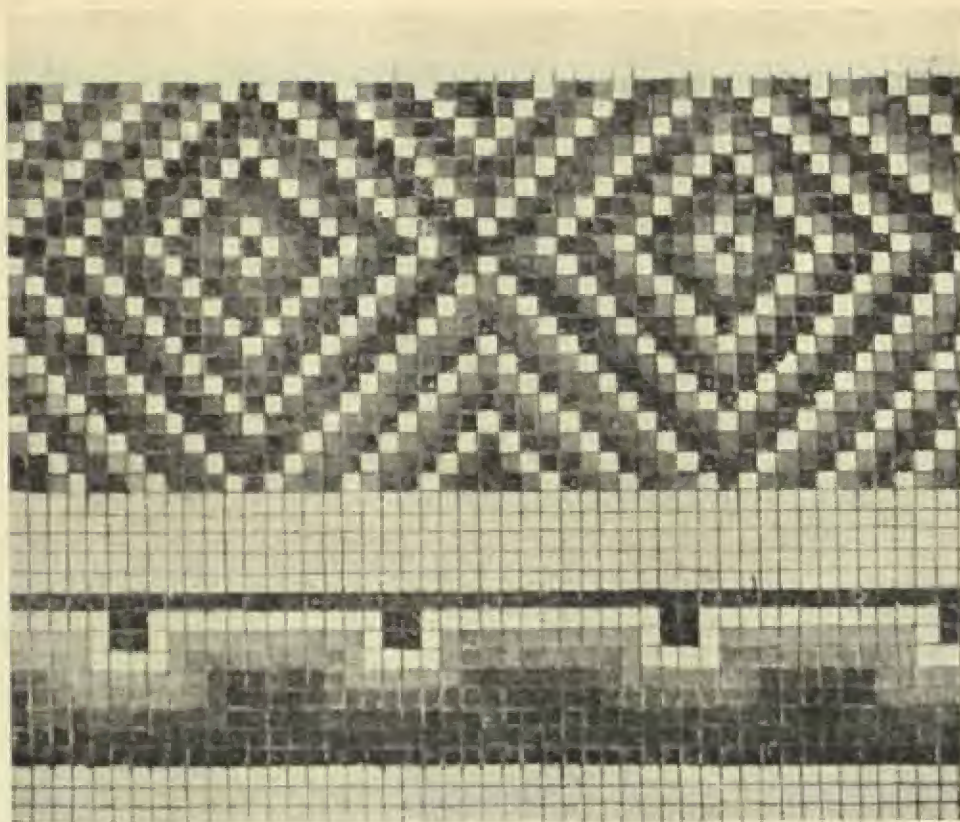


FIG. 2.—HADRRIAN'S VILLA NEAR TIVOLI
Fragment of marble mosaic on floor. Side of square repeat, 3½ inches

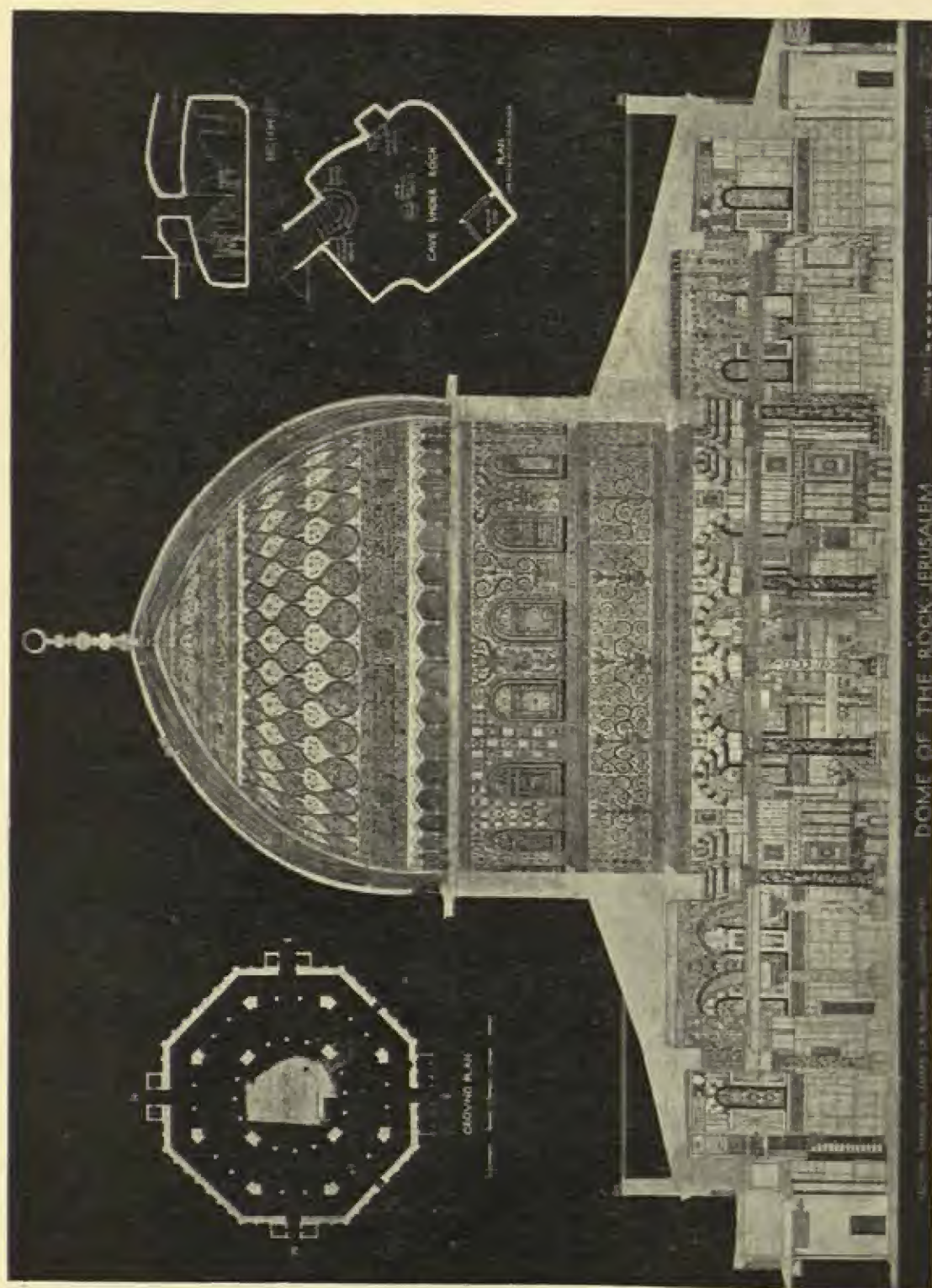
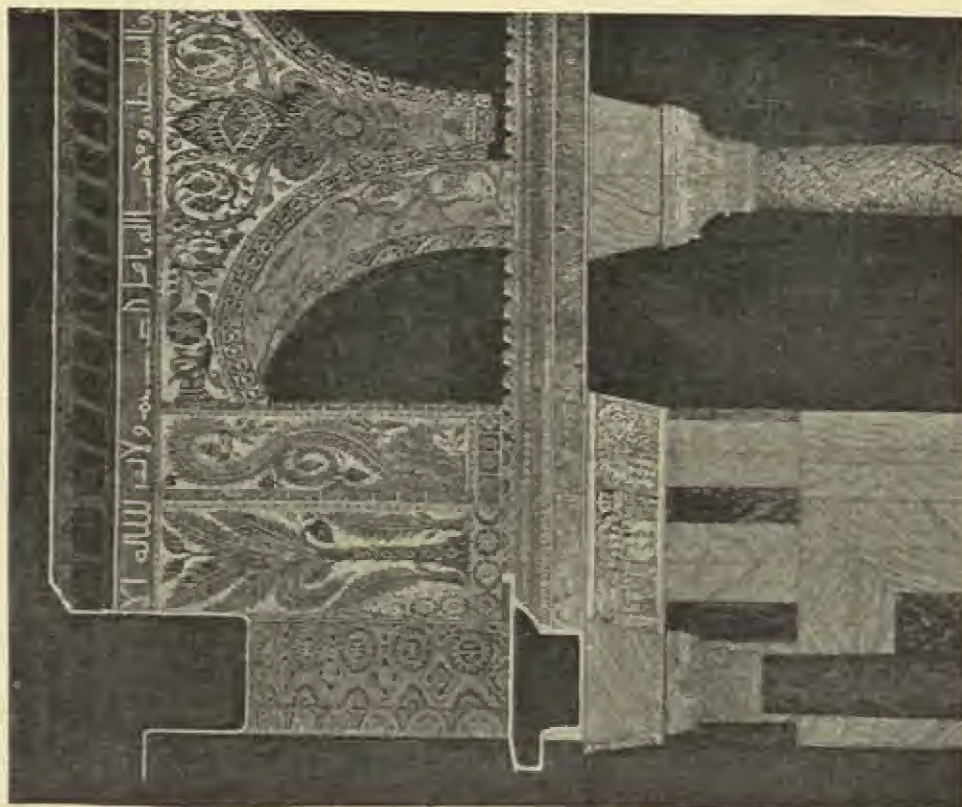


FIG. 3.—DOME OF THE ROCK, JERUSALEM

Section through building looking South. Measured and drawn in colour by William Harvey

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FIG. 4.—DOME OF THE ROCK, JERUSALEM
Detail of Mosaic. Measured and drawn in colour by William Harvey



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FIG. 5.—DOME OF THE ROCK, JERUSALEM
Coloured Glass Window. Measured and drawn in colour by William Harvey

couraged by the example of Egypt, where painting had proved successful in a dryer atmosphere.

Ornamentally-coloured terra-cotta seems to have been used at the eaves of some primitive temples. Fragments of architectural painted tilework, supposed to date from the seventh century B.C., were found at the shrine of Artemis Orthia, the goddess of Sparta, in the excavations of 1908, and are described in the *Journal of the British School at Athens* as "Painted tile; tongue pattern in reddish-brown and a meander in white paint."

Pottery with different ground colours—buff, grey and red—and ornamented with white, black and purple, seems to have been produced locally at a very early period.

The words "red" and "purple" applied to colours burnt into terra-cotta do not refer to the pure brilliant pigment colours used by the later Greeks and by the earlier Egyptians, and the displacement of the sombre and permanently coloured terra-cotta eaves tiles by marble tiles decorated with gayer, though fugitive, colours seems to have been an instance of the interplay of structure and colour in which the beautiful triumphed over the logical.

To carve a tile out of marble and paint ornament upon its surface is hardly so rational a piece of building construction as to cast a terra-cotta tile and burn in its colour decoration; but where walls and columns were treated with pigment it became necessary to treat the eaves course similarly to preserve harmony throughout the scheme.

The structure of Greek buildings, more complex than the Egyptian, has been the theme of much learned discussion.

The part played by wood in the columns and entablatures of earlier work and in the roofs of later buildings may have prepared the way for the use of pigment upon the walls. The place taken by decorated terra-cotta in the evolution of the shape and the decoration of Greek mouldings and, possibly, in the development of the Ionic volute, might be made the subject of further enquiry.

The Greeks were great potters, and the potter's knowledge of rounded form and surface must have contributed to the advancement of sculpture, as it certainly resulted in the production of numberless statuettes of all degrees of roughness and fineness of execution. In Roman times pigment was used side by side with marble plating, and in both materials a large-handed type of design is observable.

Colour decorations were often more sketchy and

flimsy than in Greek or Egyptian work, and the outlines were sometimes left as indefinite brush strokes instead of being precisely cut as in the older styles. The colours selected were often no longer pure primaries, orange being used for yellow, purple for red, and so on, a concession, perhaps, to the still more moisture laden climate. The use of pilasters was developed by the Romans in some buildings, and the seeds were then sown of a style of architecture in which the imitation of columnar orders was to introduce the division of wall spaces into constructional ribs and decorative panels. We have seen how the Egyptians regarded their columns, in some instances, as wall surfaces rolled up into cylinders, and as fit fields for colour decoration with human figures and the like. The Greeks, in spite of some notable exceptions, had generally kept their columns free of figure subjects, and developed their structural character as beautiful coloured supports of fine shape.

The Romans seem to have valued the mere shape of the column and its entablature and added them to the surface of their walls as a sort of decorative suggestion of structural fitness, even when the invention of the arch and vault had already done away with the need of architraves in actual fact. Colour, however, was not forgotten, and the shafts of columns were sometimes made of gigantic blocks of splendid marbles or granite.

From Roman times onwards architecture splits up into two camps corresponding to the types of the shell and the skeleton.

Eastern architecture retained its regard for the wall as a single shell built to the required shape, whether in straight lines or curved. Western architecture perfected a style in which the column or the pilaster or the rib and buttress were to perform or affect to perform all the work, while the intervening panels were considered as surfaces of little or no structural value. These panels between the pilasters or ribs were often replaced either by large windows or by naturalistic paintings, into which the spectator looks as if through a door or window, since they sometimes include the representation of clouds and sky, shadows and other details of aerial perspective, destructive of any sense of the presence of the wall upon which the painting has been applied.

Byzantine architecture and the Eastern styles which grew up with and from it take the shell and the dome as their ideal type of construction; and

when the Palestinian peasant wishes to build a hut in his fields, he adopts the form of a dome without question, just as the English allotment holder as certainly invests in a hut with a framework of timbers and an external covering of boarding. The timbers are columns and architraves reduced to the lowest terms. Ruskin traces the origin of Gothic ribs to the use of timber in certain primitive Lombardic churches. Other writers have seen in the rib system merely an attempt to build stone vaults as freely and economically as the Byzantines could build vaults in brick.

In any case, the history of Gothic architecture is the history of the evolution of the articulate skeleton of building, until in Westminster Hall roof the Gothic science of reducing structure to its skeleton has reached to such a pitch of refinement that the principle of its construction has been identified by some investigators with our system of triangulation in use at the present day.

How colour could be considered in relation to such skeletonised buildings might be difficult to conceive if examples and records had not come down to us of the use of pigments in Romanesque and Gothic times. La Sainte Chapelle, at Paris, has been kept furnished up with colour applied as pigment on the mouldings and ribs as well as in the panels. Stronger effects of combined structure and colour are to be found in the lower church of St. Francis, at Assisi, where shadows on the low, massive cylindrical piers combine with a sea of blue in the vaults to produce the effect of a romantic, enchanted cavern. Italian Gothic was not nearly so divided by ribs as French or English, and this crypt at Assisi is more akin to Romanesque work. In cases where the surfaces were divided into ribs and panels, the panels were reserved for figure subjects; and as the painters grew more skilful, the structural value of the panel disappears into aerial perspective, leaving the ribs to do duty, like the wires of a birdcage.

In England the whitewashings by churchwardens and the scrapings and repaintings of zealous "restorers" have whittled away the evidence of Gothic colour work as applied to masonry, but enough remains to show that colour washes were often applied to exteriors, and almost invariably to the inside of buildings. The greatest glory of Gothic colour was reserved for the windows of coloured glass and the whole rib and panel system of construction finds its chief reason and excuse in having provided a means for the insertion of ample

expanses of window space for this beautiful form of colour decoration.

The choir of Canterbury Cathedral retains some rich specimens of ancient glass and enough modern glass of an unobjectionable character to allow some idea to be formed of the colour scheme as affected by light entering through windows of strong colour. The pillars of Canterbury, unfortunately, have an unpleasant, dead look, as if some cement-coloured preservative had been applied to them; but it may be assumed that this was not their appearance in the time when the windows were new. The fact that coloured windows would fling their various tints across the interior would not deter colour-loving people from painting the masonry or from adding coloured objects to the tombs, such as still remain on that of the Black Prince.

Chartres Cathedral retains magnificent glass in a great proportion of its many windows, and the flood of colour thrown on the masonry of the interior is intensely fine. The colours in the earlier periods of glasswork are delightfully rich and strong, and are made to seem richer by the use of very small pieces of glass rimmed about with lead comes.

Increasing skill in draughtsmanship brought with it the desire for large-scale and naturalistic art in later work. Larger pieces of glass were introduced, and the beauty of the window as colour was lost in its elegance considered as a representation of figures and features. Subdued tones of grey often took the place of the older red, blue and yellow. The Gothic love of colour also expressed itself in the design of floor tiles, embroidered or painted hangings, enamel and gilding. With all this blaze of colour in every part, a connecting link was established between East and West; and Ruskin attributes the refining of Northern work to Arab influences. The suggestion of nervous energy and restlessness conveyed by the ribs of Northern buildings is only partly disguised by a colour scheme; and the ribs themselves might be relied upon to maintain harmony with the grey sky by throwing some part of the colour into the shadow.

That the grey sky plays a part in the interior effect of a building whose windows are all composed of rich stained glass may not seem immediately obvious, but it is a matter of comparison. A piece of glass that glows like a soft cushion of green moss at Canterbury might flash like an emerald at Jerusalem or Cairo, and throw into the interior a distinctly different quality of light.

When the Renaissance of Roman architecture followed the Gothic, the rib and panel system was never completely shaken off. Great artists in construction like Filippo Brunelleschi, who studied the Roman remains with the utmost care, read into the ancient construction the Gothic science in which they had been brought up. Courses of brick in Roman vaults and columns decorating Roman walls must have seemed to the masters of Renaissance art evidence that the ancients built upon a principle of skeleton framework somewhat similar to that practised by their own immediate ancestors. In the great cupola of the Florence Cathedral Brunelleschi devised a complicated ribbed vault after the study of Roman domes of much simpler construction. By force of his own personal character and attention to detail, he made a success of the work; but a dome without ribs might equally well have been constructed.

Later on structural ribs were abandoned, but the suggestion of them was retained in a rather capricious and uncertain fashion. Even in Rome itself, within a short distance of the great Pantheon and the ruins of the baths, the broad expanses of Renaissance walls were sometimes frittered away in small compartments between pilasters or engaged columns added for ornament and fulfilling no genuine purpose of structural necessity. In the interiors of Renaissance buildings the elaborate colour schemes of the great painters, who gloried in depicting figures in motion and in the accurate rendering of shadows and perspective, left the architects no alternative.

If they did not suggest structure with a framework of pilasters, entablatures and ribs, the constructional aspect of architecture would have been banished altogether, and the whole building left without apparent support.

Michael Angelo, himself an architect as well as a painter, introduced painted ribs along with a whole gallery of painted statuary, in the barrel vault of the Sistine Chapel, in an attempt to satisfy the requirements of apparent stability and to act as frames to his naturalistic figure subjects. Below the springing of the vault, however, structure seems to have been forgotten, and the great painting of the Last Judgment on the end wall appears to eat away the solid masonry and leaves one vault springer of the roof hanging without support over the centre of the picture.

In Byzantine architecture structure and colour

are fitted to one another more directly, the walls being designed to present the maximum of smooth surface on which to display an expanse of veined marbles below and a sea of golden mosaic on the vault above. Where columns are introduced they are of fine coloured marble, and are used without reference to the rules of classic trabeated architecture but as veritable supports required to carry the upper parts of the building.

The transition from the slender shaft of the column to the massive wall above is sometimes softened by the interposition of a block of marble placed above the capital and adapting it for the reception of the springing of a pair of arches rather than the bearing of an architrave. The question has been raised whether the simple surfaces of wall were designed for the mosaics or whether the glass mosaics were resorted to in order to disguise the poverty of sculptured detail upon the walls. Byzantine builders seem to have classed themselves wholeheartedly with the Eastern school and preferred their walls to be plain expanses untroubled by unnecessary projections. The fair extent of the walls and the colour that was to be put upon them were considered together in the design, as is indicated in the use of coloured marble columns, which embody structure and colour at the same time.

The colour scheme in a Byzantine church frequently included figure subjects, but they were treated in such a fashion as to leave the expression of the structural value of the wall unimpaired. The figures are nearly always depicted in simple attitudes and are drawn without perspective or shading, except of the most rudimentary order. They count for what they are: just so many patches of beautiful, varied colour on the walls or vaults. What they lack in animation they gain in solemnity and in fitness as integral parts of the architectural scheme.

Once allow naturalistic figures to be introduced into a Byzantine building and the architectural *ensemble* is utterly destroyed.

Some of the main piers at St. Mark's, Venice, are eaten away, to all appearance, by the naturalistic flying draperies with shadows and aerial perspective, on what ought to be, and to appear, the chief supports of the building. Fine figure draughtsmanship is permissible if only it is kept diagrammatic. There is much room for discretion in placing of colours on draperies, but true perspective, whether in outline or in aerial effect, is absolutely inadmissible.

The Byzantine mosaic workers, luckily, knew little about perspective, and the buildings and scenery introduced in their mosaics are like diagrams drawn in two dimensions only and take their place upon the walls or vaults with as much propriety as the stately figures.

The Dome of the Rock at Jerusalem occupies an intermediate position between Byzantine and Saracenic architecture (Fig. 3).

The arrangement of the building as a shrine or casket around and above a rock associated with Jewish as well as Christian and Moslem traditions has permitted a certain amount of controversy about the origin of the building, though the generally accepted identification credits the Khalif Abd el Melik with the construction in the year 72 of the Hegira or 684 of our era. Although some elements of Byzantine architecture are to be discovered in the massing of the building, the decoration conforms to Mahomed's ban on figure subjects, and even the forms of vegetation are very strongly conventionalised.

The sacred rock is regarded by the worshippers as the earthly counterpart of the Seventh Heaven, and the exuberant fertility of Paradise is suggested in the growing vines and its glories in the wings and crowns shown in the mosaics (Fig. 4). The Arabs made a great feature of their beautiful writing. Inscriptions in Cufic and Arabic characters surround the interior of the building and reappear in its brilliant stained glass windows (Fig. 5).

It has been objected that stained glass and mosaics are incompatible and mutually destructive, but this is by no means necessarily the case where the light outside is sufficiently strong and the spectator is content to pursue his architectural studies without undue haste.

The Dome of the Rock is a closed book to the tourist in a hurry, but so would have been the great Gothic centres of pilgrimage when all the windows were filled with stained glass and every corner was occupied with relics of saints and heroes. The Dome of the Rock undoubtedly gains in beauty from its glorious windows and the coloured rays they fling across the building. The tones of the mosaics are obscured to some extent, but to the man of leisure this is no great disadvantage, since the details reappear when one's eyes get accustomed to the purple gloom. The objection to stained glass windows might hold good where naturalistic figures with delicate flesh tints have been included in the decorations on the walls.

A shaft of scarlet light upon the features might then seem odd, but as Byzantine figures often have the outlines of their noses made of red tesserae there really isn't much in the objection as far as they are concerned. Perhaps, one could go farther and say that, where a figure is delicate enough to be spoiled by the light from a good stained glass window, it is too delicate to be included in a Byzantine colour scheme and had better be framed up in a building designed on the Western or rib and panel method. The colour thrown from stained glass windows is really useful in harmonising mistakes of colour on the walls, and in the absence of Michael Angelo, and while the mosaics are in course of application and a large proportion of the wall is bare, coloured windows can soften down the lack of harmony between polished marble and rough brick.

Bentley's wonderful cathedral at Westminster is going through this uncomfortable process at the present time. Too much marble decoration has already been erected to be ignored, and much brickwork, beautiful in itself, remains unclothed, clashing with the marble in colour and texture under the rather melancholy gleam of the pale green windows. The windows round the apse are the principal villains of the piece and steal all the colour out of the magnificent golden onyx columns of the baldachino.

To return to the Dome of the Rock. The exterior is covered with glazed tiles principally in dark and light blue, white and black, with some additions of green, yellow and grey. The temperature in Jerusalem is liable to sudden jumps from frost to excessive heat, so that the tiles are tested almost as severely as they would be in any soot-free part of England. This should encourage our colour-lovers to persevere in their experiments, since the effects produced are lovely.

The cool colours are appropriate in a country where the prevailing tint of the landscape is warm orange, and the building is intended to represent heavenly repose.

Apart from the use of marble plating and mosaic, the Arabs have also a very beautiful masonry tradition, in which colour and structure are interwoven in the most intimate manner. Arches and vaults are made with stones of two different colours with close knit points of interest at important parts of the design.

The jointing of the masonry is very accurate and

the ornament has a direct reference to the construction.

The pull of gravitation and the fact that the arch sustains itself by the mutual pressure of its voussoirs is given expression in the interwoven edges of the different coloured stones composing its curve. At the same time the colour values are played off against each other and against the light and shade due to the shape of the vault.

The idea of the unity of building in the East is well exemplified in these intricate works, where the sense of wall surface built to shape may be accepted

as the principal element of the homogeneous shell type of architecture.

The same idea of continuity is to be seen developed farther in the application of geometrical patterns spread about the walls and roofs of Arabic and Moorish buildings.

These are constructed in many different materials: of stained glass in windows, of glazed tiles, of rare woods inlaid with ivory and precious metals or of bronze inlaid with silver and gold, and carry the most glorious elaboration of colour over every portion of the building.

Discussion

THE PRESIDENT, MR. PAUL WATERHOUSE, IN THE CHAIR: LATER MR. ARTHUR KEEN (HON. SEC.)

Professor GERALD MOIRA: It is not a very severe task to propose a vote of thanks—your thanks and my own—to Mr. Harvey for his very interesting discourse. The only thing I am sorry about is that we have not had a little more enlightenment on what is to be done to-day. We have heard a good deal of archaeology, and we have seen on the screen some extraordinarily interesting examples of what has been done in the past; but I wish to get down to the hard fact of what is to be done to our dreary old London to-day. The President asked me to be one of the adjudicators of a colour competition which took place here a little while ago, and I had the honour of acting in that capacity. Some of the designs for exterior colour decoration were very interesting, but I felt a little disappointed, because there was a very vague idea in the minds of young architects, apparently, how to tackle the subject in a broad way. They knew how to make clever plans, and they knew how to do very smart water-colour drawings; but when it came down to facts of construction of colour, and the realisation of tonality, I felt there was something lacking. I wonder if this is due to architectural education, or if it is that London does not need any colour. I honestly believe London does need colour, and I am certain that if some of our streets had broad masses of tone, with blocks of colour at stated intervals, it would be far more interesting, brighter, livelier than it is to-day. It is absurd to say that St. Paul's is beautiful with the lower half perfectly black and horrible, and the top like a silver shrine. It spoils the proportion, and does no good to the architectural detail. Still, that is rather beside the question. What I have been asked to do is to propose a vote of thanks to Mr. Harvey, which I am sure you will accord to him very heartily.

Mr. HALSEY RICARDO [*F*], in seconding the vote of thanks, said: I should like to support Professor Moira's remarks with regard to the importance of colour in buildings. What Mr. Harvey has proved is that the desire for colour is innate. It starts before history—

in Crete—and extends to the present day, as is indicated by our advertisements at any rate. Where you see the desire for colour conspicuously shown is in such places as Constantinople and Jerusalem; you will find examples also in Persia and Asia Minor; there you see the people generally want colour.

In those countries you get, in the spring, a flush of colour, and beyond that you have nothing. It is dusty; dusty olives, dusty cypresses, dusty figs, dusty pomegranates, and, under black shade, dusky sycamores. But they said: "We must have some alleviation from this"; and so they have their buildings with coloured tiles and so forth—mosques, domes, cupolas, minarets are all masses of colour, because they could not do without it. That is so in Jerusalem. It also applies to us in London, because when you walk in the streets, except for what you get in the streets themselves and in the shop windows, London is devoid of colour.

We have got, I think, into a curiously sophisticated state with regard to what a building should look like. I think Mr. Harvey said that the people in Gothic times limewashed their buildings, and that brought to my mind a church that I know something about—Whit-church Canonorum. The canons could afford it, and whitewashed their church every few years, partly because they wanted to show the church in its real beauty, partly to preserve the stone. If we cared enough about our buildings, we should do the same here, because limewash is the finest known preservative of stone. When the scaffolding was removed from a new building it looked beautifully clean, and people exclaimed: "Here is a masterpiece!" But in a few years it sank into the general ruck of the dirtiness of London. If we cared enough about these things, we should say: "For goodness sake come and wash these buildings as a preservative." That is why I say we are in a sophisticated state. If one morning we arrived at Victoria Station and saw that Professor Lethaby and a team of men had whitewashed Westminster Abbey, should we not say it was an

outrage? It would not be; it would be reproducing the Abbey as it looked when at its best—that is, in the time of Henry III—and it would be preserving it far more than is being done at present by tinkering it with fresh pieces of stone. A great deal of the beauty of Westminster Abbey is lost by the grime that coats it. If people said it was an outrage to wash it, it would be because they had an entirely wrong idea, a wrong way of looking at things. Seven or eight years ago I was working at the Admiralty, and my work was at Lowther Lodge. I had as confrères some dons from Oxford and an official of the British Museum, and after lunch we walked in Kensington Gardens. One day they had been washing the face of the Albert Memorial, and it was quite beautiful to see it, in the winter, over the trees against the blue sky in January and the leaden sky of February. And when, as now, there was a burst of green, it was lovely to see the Memorial. My confrères fed me, not with first-hand impressions but with textbook opinions, with the hasty press verdicts of fifty years ago. But here, incontestably, was a beautiful thing.

One of the troubles about colour work was that it was captured to a certain extent by the painters and the sculptors. In the early examples of coloured architecture which we see in the paintings by Mansueti, Bellini and others, the houses are chequered and painted and diapered. By and by they got Tintoretto and Giorgione to put their frescoes on them, and the salt sea air injured them. Then they said: "We will not do this any more; we will not have anything less than the best, and we will not have the best where it must get ruined." And the poor house-painter was shelved, and we get Venice as it is at present, without the colours it used to have. What is proof of my point is that in Islam, where the painter and the sculptor are not allowed, you still have the coloured mosaics and the splendid tiles. There was another sophistication during the Renaissance. They dug up Roman statues which had tumbled down and became embedded, and when they were dug up the traces of colour were very slight. There was then much catchpenny talk about "purity of form, shade and mass," a kind of talk that persists to this day. We have this inhuman statuary about the place, and it has no relationship to what we want. No wonder when we put statuary about our buildings the people do not look at them! Whoever notices the groups of people on the new War Office building? They are disconsolate up there: there is nothing about them to catch the eye.

Professor Moira said something else which bears very much on what we can do, which is that we might colourwash, and so enliven much of the architecture at the present moment, especially the stucco architecture. Take, for example, those fine blocks of terraces—Cumberland Terrace, Chester Terrace,

Cornwall Terrace—which go round Regent's Park. They, with their pavilions, are complete architectural conceptions. But each individual tenant paints his own strip, which may go half-way through a balcony; and, of course, that is all wrong. If the terraces were treated as an entity, there could be much decorative colouring. Think how beautiful the effect might be at the present time, with all the fresh green about the park. Now, when you cross Westminster Bridge, you see the freshness of stone, with its bright red roof, presented by the new County Hall, and it looks lovely. I have great pleasure in seconding the vote of thanks to Mr. Harvey.

Mr. WILLIAM WOODWARD [F.]: Many thoughts have occurred to me while Mr. Harvey has been reading his paper. I remember, many years ago, that Owen Jones, than whom there was no greater authority on colour—and I recommend young architects to study his *Grammar of Ornament*—said many wise things about colour. To-night we have had thrown on the screen an illustration of the west front of St. Paul's Cathedral, which shows the effect produced by the soot of London. Professor Moira has fallen foul of the lower part of the west front, because of the great contrast in colour it presents. To my mind, the atmosphere of the city of London has provided the very colouring we want for the lower part of St. Paul's Cathedral, because you must always have the deeper colour in the dado! Sir William Richmond, whom I had the honour of calling my friend, started a scheme of colour for St. Paul's Cathedral which, had it been permitted—and it would have been but for a particular circumstance—would have been magnificent. That circumstance was the publication of a letter in *The Times* by an American who was on a visit here. The mosaic work in St. Paul's, which Sir William Richmond did for the Cathedral, and the magnificent coloured windows which he designed for it, were all put a stop to by that one letter in *The Times*. Sir William had not been to St. Mark's at Venice for nothing: he knew what the Salviati mosaics in St. Paul's looked like; he knew what the old men had done in the mosaics in St. Mark's, and that they were placed so that the various facets were shown to advantage.

With regard to applied colour, Mr. Harvey has elaborated three points—colour produced by colour material, colour produced by pigment, and the colour produced by the soot of London. Take, first, colour produced by the application of material. Some of my happiest days were passed at the Alhambra at Granada. If you want to know what colouring is, study the examples there. Go to the Botanic Gardens here and study the colour of the geranium, then go to Spain and see the effect of the sun and the atmosphere there, and note the difference. Owen Jones, Wyatt and others produced, in the Crystal Palace, replicas of the Alhambra

Court, but their schemes have all been damned by His Majesty's Office of Works in providing the War Museum. I wonder whether many here remember that about twenty-five years ago Owen Jones applied colour to a building in Oxford Street. But it was of no use in London, the soot destroyed it. In a recent paper, however, Mr. Ricardo told us we could use a colour in London which would be washable and permanent. Referring again to St. Paul's Cathedral, letters appeared in the *Daily Mail* two or three years ago headed "Wash St. Paul's!" and a correspondence ensued in which I joined. All the present beautiful colouring would have been destroyed if we had done so. We all ought to wander through Westminster Cathedral and admire its magnificent architecture; but the application of colour in marble in that building, with one or two exceptions, is an utter failure.

Mr. Harvey's paper gives us much food for thought, and we should especially thank him for telling us something about Spain, where you must go if you want to see the successful application of colour.

Mr. EDWARD WARREN [F.]: I am sorry to disagree with Mr. Woodward in regard to St. Paul's Cathedral. For my own part, I think the present colouring with its shadows, hides its contours. I cannot understand how anybody can seriously admire the patina of grime. Should we like to see Paris covered with it? But Parisians are careful of their buildings, and wash them. If you live in certain quarters of Paris, whether you like it or not, you have to close your windows periodically while a powerful hose plays upon the building. Why can't that be done in London? It would be a means of keeping London more sightly and more seemly than it is. I quite agree with Mr. Ricardo, that whiteness and cleanliness in a building add beauty to it. I remember William Morris, shortly before he died, talking about architecture to a few of us, and he said: "What would I not have given to have seen a fourteenth-century cathedral the day after the scaffolding came down—seen it in its beauty and cleanliness, its whiteness and its sharpness of curve and outline."

With regard to applied colour, I was very much interested in what Mr. Harvey told us. He told us much that some of us who have been in the East may have seen, but also a good deal more. He spoke of the application of colour to Greek buildings, and of its being derived from Crete and Egypt. He did not, I think, appreciate quite the immense number of fragments which exist in Greece, though they have to be looked for, which show the manner in which the Greeks coloured their buildings. When I first saw the Parthenon, thirteen years ago, I had the good fortune to go to Athens with one or two painters and a sculptor. The evening before we were discussing the possibilities of colour on the Parthenon. I said: "It is well known that it was coloured, though we do not know whether the

columns were so." The sculptor said: "Is it conceivable that the Greeks, about 400 B.C., were such fools as to colour their beautiful material?" I said: "Certainly." We got an order to allow us to climb to the top of the old Turkish staircase, the sculptor and I, and then he had to give in completely, because there, on the inward face of the architraves of the peristyle, where the western sun could not get at it, was the colouring—large key patterns of black, red and yellow. In the Museum on the Acropolis everything is coloured; there is almost no piece on which there is not some vestige of colour. There was the torso of a youth on horseback, which, if I had seen it elsewhere, I should have taken for an Italian Cinquecento youth; there was the tight hose, parti-coloured costume, one colour on one side and another on the other—namely, pink and green; and there were busts and heads of women, which had traces of gold on their hair and tinting on their faces. The eyes were filled with enamel or mother-of-pearl. If you merely consider the Parthenon, with the holes for the attachment of bronze, the scabbards, the shields and so on, you can be certain that the bronze was not left to go black or green. If the bronze was gilt, is it not probable that the warriors were coloured? The Greek and Egyptian temples were coloured, and as brightly and as gaudily as temples could be. The natural wish for colour crept west, and extended to our Gothic churches in France, in England and in Europe generally. If you examine churches carefully, particularly the underside of mouldings, and the backs of niches, you will find colour. The west front of Wells Cathedral was coloured, and the same is true of Salisbury Cathedral. Most of our cathedrals must have been a blaze of colour. If you want to see the effect of coloured statuary on cathedrals, you have only to go to Wells to see the gilt "quarter boys" on the clock, delightful even against the subdued tints of the old masonry. I see no reason why, in London, and in England generally, if we only wash our buildings and keep them clean and renew their colour as often as is necessary, we should not have an immense amount of applied colour in the streets. There is the possibility of glazed majolica. Mr. Ricardo has shown us what can be done with coloured tiles and bricks. There is no reason why, if we really felt the instinct for colour which our fathers felt in the Middle Ages, we should not have it to-day. I hope the revival of the idea of colouring buildings, and the impetus given by the Institute to young architects in the direction of colour-schemes, will lead to a careful study and teaching of colour, and that we shall get a school of young colourists in architecture. They will make their failures, as everybody makes failures, but they will struggle through, and help us to achieve again bright, merry and liveable towns.

Major H. C. CORLETTE [F.]: Mr. Harvey's address has been largely historical and archæological.

Archæology is valuable; but let us try to find out how colours were painted on walls and ceilings and made to stop there. I agree with Professor Moira in hoping that we shall build up in this country a valuable school which understands what mural decoration is. It is impossible for any of us to build a building without getting some structural colour in it, because our materials dictate to us in this respect. But if archæologists or historians can tell us how the painter-decorators put the magnificent conception on the vault of Albi Cathedral for instance, we should be grateful to them. Many painters do not sell their works; if they would turn their thoughts to decorative painting, we should get the beginnings of a school of decorative painters in this country. They should learn the difference between decorative painting and painting in the pictorial sense. I should like to express my thanks to Mr. Harvey for his valuable paper.

Professor R. ANNING BELL, R.A.: Having been invited, I cannot very well refuse to say a few words, though much of what I might have said has already been referred to by others. The point has been raised as to the washing of modern buildings. The advantage of washing modern stonework is usefully illustrated by the Victoria Memorial in front of Buckingham Palace. You will notice how beautifully both the marble and the stone are weathering. The monument is washed constantly, and the marble now looks not white, but has a delicate greenish shimmer; it is a most charming colour. The stonework of the large piers looks equally well, while other contemporary stonework in London is already getting dingy and disfigured. That proves that the bath is as good for stone as for the human body. When you wash stone you cannot wash everything off; some of the dirt gets into the interstices and stays there, and only serves to emphasise the form, and brings out the sculptor's intention in the figures.

I certainly agree with Mr. Ricardo in regard to the self-appointed critics and writers who have taken it for granted that certain lines of thought which come naturally to the literary mentality are necessarily to be followed by artists. I think that the theory of the necessity of whiteness in fine sculpture arises in this way. The sculptor works in marble, marble is white, white stands for purity, and therefore pure sculpture should be pure white. That is the kind of criticism written so easily. Unfortunately, the printed word carries weight with almost everybody, and it is difficult not to be influenced by opinion authoritatively stated. But if you look at things frankly, with your own eyes, it is much better. You will then realise that many of the ideas we are brought up on are false, and that doctrines laid down by these people are not laws.

Colour might be used admirably in more cases than at present. For instance, I would like to see buildings such as the new War Office with the figures painted.

Let us have buildings done up in a cheerful way, certainly, but if you are going to colour, you must colour a whole street; you cannot have everybody painting his particular building in his particular style. If that is done it can be but a local spot, it does not come into a scheme. But if colouring were done in the mass, and if we had some public authority whom we could trust, who would control these things and would discuss schemes for colour, London would be the better for it. We are glad to see an improvement even in the painting of front doors. There is much more cheer now in these matters than there was. I well remember the dreary Pompeian red which used to be so much the fashion in Pimlico. In England white has been too often translated into "stone-colour." Now, as one goes along Regent's Park one sees that the stone-colour is disappearing from the houses, and that when they are painted afresh it is a cream or white, which is a great advance.

Mr. P. J. WALDRAM [*Licentiate*]: I would like to mention one point concerning a recent scientific advancement which is of considerable use in the study of important schemes of colour. The difficulty in this country has always been to reproduce, at different times of the year and in different atmospheres and degrees of light, the colours for dyes intended for use in various parts of the world. In Bradford I was brought into contact with these difficulties. Until a short time ago scientists had been unable to imitate daylight in artificial colours emitted by lamps, but that difficulty has now been solved, and architects and manufacturers can now know exactly how the colours they use will look in bright sunlight. I am assured that in Bradford, for instance, materials of the exact hue in which they will be seen in far Eastern countries can be manufactured by the use of this lamp. This method may prove of great use to architects in their colour schemes for buildings.

Mr. MATTHEW J. DAWSON [*F.*]: I would like to add one word to this interesting discussion.

With regard to medieval colour, we must not run away with the idea of too much whitewash. Many of the old churches and buildings were whitewashed, but the portals and the most interesting parts were emblazoned in colour, which would greatly alleviate the deadness of the white. A cathedral like that of Wells was not white, it was a yellowish-brown, and the sculpture was picked out in colour on that background. I have examined the building very carefully. With reference to Westminster Abbey, it is worth noting that some of the ancient tombs have recently been unearthed from their pall of dust and everyone interested in colour should see them; colour experiments are also being carried out on the stalls. In the modern application of colour we have great difficulties. It is interesting to see buildings in ceramics; but they must be washed

regularly, and some means of cleaning should be provided. The Swan building in Oxford Street has often been washed in the lower portion, but the upper part shows nothing but soot stains, which become more difficult to remove the longer they remain, and make the ceramic surface and the bright colours more displeasing.

Mr. Harvey says people want colour. Every advertisement shows that need; all the omnibuses and everything which can be coloured is of a bright hue. With regard to stonework and colour, there are many opinions. Mr. Walcot, who is now a member of the Institute, shows us in his drawings the beauty of the effect of weathering on stonework; he does not forget to add the colour of passing objects or of the pillarboxes; his pictures, indeed, glow with colour. In the Strand there is a good instance of a modern application of colour, in a building close to St. Martin's-le-Strand; it is coloured with advertisements, and gives a suggestion for a temporary colour treatment; it certainly looks fresh and bright.

Mr. F. R. HIORNS (*F.*): Professor Moira raised a very interesting question when he asked why we cannot apply colour in a more definite way to London buildings. It seems to me the answer is, that our modern buildings are not generally designed to receive colour. I gather from the various examples which Mr. Harvey showed in connection with his interesting paper that the buildings to which colour is applied so beautifully are architecturally treated in such a way that they present the broad surfaces necessary for the effective display of colour. We know that polychromatic decoration was applied generally to buildings in Egypt, Europe and Asia for 3,500 years, and if we study the buildings characteristic of these periods and countries, we find that they were obviously intended, from the first, to receive such decoration. In late Renaissance times, in Italy, the treatment by colour was dropped, and for two or three hundred years the very great effect of beauty which can be obtained by colouring buildings has been generally left out of account. I think architects themselves are, to a large extent, responsible for the lack of encouragement in applying colours to buildings; in our designs we do not seem to arrange opportunities for its application. In thinking of Pompeii, for example, and the very general way in which the Greek decorators applied colour to the houses, it has struck me that the whole arrangement of the plan, the columns, the pilasters, the panels on the walls and the lighting, had the definite object of a colour scheme in view. The extraordinarily beautiful effects produced showed the application of colours in a most effective way. If we, as architects, in considering our buildings, bore in mind, particularly with regard to interiors, the arrangements whereby colour might be suitably and naturally applied, we should do some definite good. Mr. Harvey's knowledge of colour decoration in the East is exceptional; we

have only to look round the walls to see that he has produced some of the most interesting drawings of colour decoration which have appeared for a generation.

The CHAIRMAN (Mr. Keen): At the Institute Annual Dinner a few nights ago Mr. Fisher was asked to speak, at very short notice, in the place of Lord Middleton. He told us in his speech what Lord Middleton would have said if he had been present, but I cannot tell you what Mr. Waterhouse would have said to-night if he had been able to stay. He very much regretted he had to go, and I know he would have said something worth listening to on this very interesting subject. I think Mr. Harvey has very well justified his position as an Owen Jones Student. He has told us what has been done in the past and in other places, but he did not let us into the secret of what should be done in London at the present time. Perhaps he is a wise man, and will reserve that for another occasion. At any rate, it is a subject which could well occupy our attention for an evening. I had made a note myself as to what the effect might be if we applied colour extensively to buildings in London, but Mr. Anning Bell anticipated me when he said it would have to be done with due control from outside. The idea of having a terrace of houses coloured differently from end to end is unthinkable. One of the characteristics of London architecture is that every man is a law unto himself—there is very little control from outside; and the result is an extraordinary motley of architectural effects. If colour were permitted on the same terms, that is, without control, one is afraid to think of what the result might be. There is a great amount of colour already in London—there are the trees, there are the advertisements, and the contents of the shops; there is the colouring of the omnibuses which go about the streets, and the colours of the dresses of the people. How far it is desirable to use colour in London is a very great question. To my mind, having to wash buildings down every year or two is a confession of failure or of weakness. If colour is to be used, it should be of such a character that it would not need to be washed. Up to now, the most successful things which have been done in the way of applied colour, as distinguished from building material, are the places which have had to be washed from time to time. The old red brick, and the colour of natural materials like stone, are fairly safe, but when we come to applying pigment or glazed enamel to building materials, we must have knowledge and experience in order to do it successfully. I hope Mr. Harvey will give us some guidance at a later date.

Mr. HARVEY, in reply, said: I thank you all for your kind reception of my paper, and for the most interesting discussion. It is not possible, at this late hour, to answer every point in detail, but I may say I am no foe to colour in London. If my paper had any practical bearing at all, it was to point out that colour

in London is a very difficult problem, and until we can settle the difficulties of it in ordinary building materials, it is a little premature to go on to deal with extraordinary building materials. That is why I projected St. Paul's Cathedral on the screen, and contrasted it with the Houses of Parliament. In Wren's building you have a beautifully selected material, which, in spite of differences of opinion, we all believe to be beautiful, notwithstanding its soot. In the Houses of Parliament a less suitable material has been employed, which is going dingily sooty instead of brightly sooty. Until we have managed things like that, we have not taken the first step in our way towards a good and well-coloured London.

Another point I tried to make was that we live in such commercially-keen, cutting times that an architect, frequently, has to build the side-wall of his structure in cheap material when the front is of a material of much better colour. From the colour point of view, that is a shocking crime. As you walk along a street, you usually see the side of a building first of all, so that you see its bad colouring first, and the putting of a good colour on the front is futile. We have to get the main things right before we descend to detail.

The difficulty of climate is a very real one. Apart from soot, England's skies are not the skies of hot countries: they have not the bright, solid-looking blue. We are thankful for blue skies when we get them, and bright coloured architecture would be suitable on those days; but on other days bright coloured architecture is offensive. We do not like bright coloured hoardings: they are too glaringly and unthinkably bright, and they are put together in such a haphazard scheme that they are very teasing. To make a good colour scheme in London you must subdue your brightness to some extent. In the beautiful building by Mr. Ricardo, in Addison Road, he has given us bright colour for London, it is true, but it is not bright compared with the tiles used in a hot country. Red is not present, but creams, greens and blues predominate, and they are of a tone which a Persian or Moorish tile-maker would have considered grey; their choice would be of far more startling colours.

As to the use of special lamps for choosing our colours, that may be put into practice, but it is one of those points that show the difference between the English climate and that of Bombay, for instance. If we have to employ special electric lamps to enable us to see materials in their own natural hue, that is an admission that our climate is one in which we cannot play ruthlessly with bright colours; we must crawl before we can run. Think in terms of ordinary materials, get them right, then gradually weave your interesting materials into the scheme.

And the scale on which we put on colour is very different from the scale on which colour is introduced

in hot-country buildings. In most of the Oriental examples hanging on the wall here the colour is in minute quantities; the thickness of one's finger is the average, except in the case of background. Colour details are the size of small leaves; the size of the natural objects. On the big pavement design you see the exact sizes of the little bits of stone. In a medium-hot climate, that of Florence, that was considered an appropriate scale of colour decoration.

Another point is the difference between Eastern and Western buildings. Eastern buildings are frequently criticised from the standpoint of the Western architect. Moorish architecture has been said to be flimsy, unsubstantial, trivial, and all that is bad, just on the plea that it is not solid. How that idea came about I do not know, because it is intensely solid. It just lacks pilasters, ribs, etc., which we look upon as giving a building solidity. They work on a different principle to ours, that of continuity of wall surface, and, with them, a building is strong in proportion as it is continuous.

CARDIFF CONFERENCE OF ARCHITECTS.

The R.I.B.A. Conference at Cardiff, which was held from 8 to 10 June, was attended by 170 members. The programme, which has been published in the JOURNAL, was successfully carried out. There was a representative attendance of civic authorities, the presidents of local organisations and architects at the banquet on 9 June. The President of the Institute was in the chair, and the toast of the R.I.B.A. was proposed by the Lord Mayor of Cardiff (Councillor F. Harold Turnbull, J.P.). Papers were read at the Conference by Major Harry Barnes, M.P. [F.], on "Unification and Registration" and by Mr. Herbert T. Buckland [F.], on "Civic Architecture and Advisory Art Commission." The papers and a report of the proceedings will be published in a subsequent issue of the JOURNAL.

ROYAL GOLD MEDALLIST.

Mr. Thomas Hastings, of New York, Royal Gold Medallist 1922, will arrive in England about 23 June, accompanied by Mrs. Hastings and several friends. He will be present with Mrs. Hastings at the Council Dinner on 26 June, and he will receive the Royal Gold Medal in person at a General Meeting on the same evening.

THE ARMSTRONG COLLEGE, NEWCASTLE-UPON-TYNE.

On the recommendation of the Board of Architectural Education, the Council of the Institute have decided that the first three years of the Diploma Course of the Armstrong College be recognised on the usual terms as exempting from the Intermediate Examination of the R.I.B.A.

The Value of Public Opinion*

By HALSEY RICARDO [F.]

IN treating of this subject, "The Value of Public Opinion," it is natural that I, an architect, and here in this Royal Institute of British Architects, should view the matter from an architectural standpoint. The formula that I accept as the basis of my position is "that modern architecture should be a developing structural art, mainly concerned with the building and improvement of cities, and the provision of the structures needed in civilisation," and I want you to bear in mind that *living* architecture (as all true architecture should be) must be progressive—conforming with the requirements of the time. Progressive, that is to say, much as our speech is progressive. We don't speak now as John Ball and Lydgate spoke—nor even as Swift and Addison talked in Queen Anne's time. Many of the words they use have a different function in our vocabulary. More recent discoveries (since their time) in science, terrestrial and celestial, have altered our outlook upon the world and given their words an extended meaning. Besides a host of additional substantives and epithets—that would have dismayed Dr. Johnson—we have made old words carry new loads, or vaporise themselves into mystic symbols. So in architecture, there are a number of features endeared to us by familiar use and old association, some of which, in our present day, have to play a part beyond or foreign to their original function.

It is often not easy to decide, till after careful consideration, whether such features are consistent with a living texture, or are the husks of a structure that is in itself but a dead reproduction of some part of a building. As in speech, although the music and the rhythm of the words chosen count for a great deal, it is the trend of thought infusing them that matters, so in building it is the quantity and quality of the thought that raise it to the plane of fine and living architecture.

But how is this to be gauged by the laity—the man in the street? My answer would be: Cultivate your powers of observation. Observation begets care—care begets insight into the conditions of production—and from thence follows judgment. Observation implies discrimination. You can divide the objects into those that you care for and the others that are beyond your care. But you cannot rest there. You will want to know why you care, and that involves analysis of the ways and means of production, of the ideals aimed at, of seeing past the work into the mind of the workman. How has it contributed to the part, and how have the parts contributed to the whole? There is no need to encumber oneself with second-hand opinions as to "style" and "beauty"—technical information is another matter—the duty is to

deal honestly and conscientiously with oneself, and then to apply such tests as one's knowledge and experience may supply. Such inspection is due to the architect and the craftsmen who planned and erected the building. They will work, I know, without this recognition, doing their best for the work's sake, with the dim hope that some few will discern what they were aiming at, what were their limitations and the conditions imposed upon them; but recognition is sweet, and why should it be denied to them? It was not always so. It is merely through carelessness that we have allowed it to become so.

Five hundred years ago, when the world was less populated, when the apparatus of living was so much simpler, when common articles of use in the house were fewer, and needed to be more durable, and therefore made under the stress of personal criticism, almost everybody was competent to pronounce on a work, from a castle to a joint stool, since the canons of criticism were simple—was the thing efficient for its purpose, was it pleasant or interesting to look at and to handle, was it well made and able to endure the service it had to perform, did it express the ideal of that age? These were simple tests that almost everybody could apply, and almost everybody did. Cimabue's picture of the Madonna was carried in triumph through the streets of Florence to its destination in the church of Sta. Maria Novella, and the quarter through which the procession passed was called the Borgo Allegro in recognition of the honour. Not only was *man's* handiwork thus appreciated. The oxen that drew up the steep acropolis of Laon the heavy blocks of stone to build the cathedral were gratefully immortalised for their share in the labour needed. Their stone effigies grace the twin towers of the cathedral, and from out their shelter at the base of the spires one sees their heads gazing at the completed work below them. The market crosses, such as at Winchester, Salisbury, Chichester, and elsewhere, were matters of popular interest, outside clerical influence, and were the occasion, I doubt not, of keen interest and approval. The economic side of the undertaking was a matter of public consideration—there was to be no waste of material; on the other hand, no unsuitable material was to be used. There was every reason to use only what the locality provided, to avoid the expense of carriage—or the oppressive tolls exacted by the proprietors and the landlords over whose property the stone and timber were carried. The carver took pride that his ornamentation should involve the minimum reduction of the stone block he was carving; crooked pieces of timber were treasured against the day when they should come in appropriately as part of the framing.

* A Public Lecture delivered at the R.I.B.A. on 18 May 1922

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Later came the emergence of the individual artist and the failure of the Guilds. There was first sly and then angry criticism of the clergy—shown in the out-of-the-way carvings of the misereres in the choir-stalls—and then more directly in outbursts of Lollardism, leading to the Reformation. Tudor architecture was itself impersonal, but the importation and immigration of foreign craftsmen prepared the way for Torrigiano's tomb for Henry VII., for other Italian and Dutch artists, and for the career of Inigo Jones.

The accepted—by the people—super-humanity of the great Ministers of State warranted such buildings as Burghley, Audley End, Kenilworth Castle, Hampton Court, and the like, to house the huge retinues of followers, attendants and servants, and to dispense the extravagant hospitality given in these palaces; in the Restoration after the Civil War the importance of these magnates still bulked in popular estimation, their share in the material prosperity of the country increased disproportionately, and they considered it due to their status to provide themselves with immense buildings—Castle Howard, Blenheim, Houghton—although the social functions that had justified the earlier mansions had now gone.

Public opinion bore upon the unreality of this claim, and the frozen correctitude of Chatsworth, for instance, shows its effect. Part of the popularity of the elder Pitt was due to the (comparative) simplicity of his ménage. The "Great Commoner" was part of the common-wealth.

But spectacular architecture had been delivered into the hands of the illuminati; it was not for the "man in the street" to pronounce upon it, and, lying outside his cognition, he ceased to interest himself in its achievements. In a quiet sort of way, popular opinion busied itself over the laying out of squares, crescents (London, Bath, Buxton), constructed avenues (Dorchester) and pleasant oases, such as village greens, and had a considerable word to say in the interior planning of town and country residences. The interior fittings and "moveables" of the eighteenth century are unrivalled both for design and workmanship, and are obviously due to the very careful censorship of the purchaser.

But to this rather lethargic heterogeneous connoisseurship came a blast from the trumpet of action—a spiritual awakening from the material contentment of things as they were—a fierce discontent with the present, with a pathetic look backwards toward the past. The ecclesiastical and literary world rose to it. The Church woke from her somnolency and attempted to put her house, at least, in order. Pugin carried a fiery cresset in his hand, discovering the apathy and neglect into which her buildings had fallen. Sir Walter Scott drew enchanting pictures of what life had been in the past and Wordsworth of what there was still in the quiet backwaters where he lived. There was unrest and searching of mind

amongst thoughtful people of all classes, and on this great wave of emotion came riding in, as its crest, the Gothic Revival. All its strength and all its value—and it was very strong and of priceless value—were due to the intensity and power of this great wave.

It spent itself, on the ecclesiastical side, because its base was not broad enough. It fell into the hands of precisians for precedent. Instead of recognising that the Art of Architecture was a living and developing art, it laid great stress on reproducing past features, ignoring the vital changes that had taken place in the habits, as well as the minds, since the Reformation.

The attitude of the literary mind was different. It was admitted that the time was ill-jointed, but not that it could not be set right. Carlyle was destructive, Ruskin constructive. There was much to be learnt from the features of the past, but the real duty was to discern the principles that underlay them. Ruskin's teaching was of enormous importance. It has, of course, been widely disputed—but directly and indirectly the spirit of modern living architecture derives from him. Not only architecture, but to-day's outlook of man on man is due to his inspired, fervid teaching. And after the wreckage and dislocation of the past recent years, it is his torch that shines most helpfully on our way. We have to find a consensus of opinion as to what things in life really matter. How far should individualism prevail? What are the duties and obligations one owes to one's fellows? And how is one to fulfil these? I have no title to convert my desk here into a pulpit and be springing upon you unawares a sermon. But I want to plead here the responsibility and duty to others that we all have as citizens and members of the Empire. And I would base my appeal, in this present case, on quite elementary offices that we owe to ourselves as well as others. We should exercise and cultivate our powers of observation. One of the most valuable features of the training of the Boy Scouts is the directing this power of observation and cultivating the results that flow from it. They are taught to name and numerate the fauna of their locality, their ways of life, their spring and autumn vesture, their friends and foes. They are taught to collect and name the flora of their locality, the time of their blooming, their shy retreats, their struggles for existence, their economic value to us and the other creatures, tame and wild. They are taught something of the geology of their locality, and, by map-making, of its geography. Its past history is a matter of their concern—the history of the county as well as the parish, of the brave deeds that had been done and that were being done. Their world becomes a new thing to them, of absorbing interest and care. But it is *our* concern as well as the Boy Scouts'; and whilst we betray our obligations in this matter, the evils we deplore go on, and often increase. Is the difficulty of self-education so great that we are reluctant to undertake it and prefer to rest and form our judgments second-

hand? To how many of my audience, in their walks or omnibus rides through our streets, does it occur to consider the general and particular effect of the buildings lining them? How many can give me the particulars of the ornamentation in the pediment over the porch of St. Martin-in-the Fields, or could tell me which of the two western towers to St. Paul's Cathedral shows the clock faces? What sort of reply could you make to an inquiry as to what buildings caught your attention on the way from Oxford Circus to the Bank, and why? And yet this apathy, this shirking of one's concern in citizenship, does matter very much. It leads to acquiescence in needless evil, to a kind of fatalism, to acceptance of things as they are, to false judgments and canons of taste. If Professor Lethaby, for instance, were courageously to whitewash the exterior stonework of Westminster Abbey, and so give us a chance of seeing the church as it left the builders' hands, in its prime, in the time of Henry III., what an outcry of vandalism there would be, although it is more barbarous of us to allow the structure to decay, in a mantle of corrosive dirt, obscuring the real charm of gaiety and lightness, than to preserve it with a protective coat of colour wash. We have allowed ourselves to get into an entirely sophisticated attitude towards our buildings, to imagine we prefer them dirty and patched, crippled, war-worn veterans, whose bandages and patches we replace. If anyone glanced twice at the Nelson column in Trafalgar Square, he might come to the conclusion that Nelson himself would look more real and impressive were he and his dress painted to represent exactly how he looked in daily life: the bronze capital on which he stands, cast from the cannon captured in his naval engagements, should be gilt, to disclose this piece of history. Observation, once aroused, does not stop at the mere stage of notice: questions at once arise as to the purpose of the object, its history, and its appearance. The power of analysis increases by the exercise of it. It will be found impossible to spend so much interest on the object without coming to some conclusions as to its real worth. These conclusions, of course, to be just and adequate, require understanding of the demand that brought it into existence. How far was the demand a creditable one, how far was it real or only supposed? So much is done, in the present day especially, in response to a supposed demand, which is really non-existent. And the demands that actually exist are not all of them justifiable ones. Besides, there are qualities difficult to gauge, difficult to express, of which we may be only subconsciously aware—qualities such as appropriateness to its position, to the dignity of its purpose, to its harmony with its surroundings. Questions like these are not answered easily, though they may be immediately felt, and we have to consider how far tradition, contemporary criticism, and prejudice play their parts in our impressions. The mind clings fondly to old associa-

tions: we part reluctantly with outworn features, and wisely, for they form the steps of our progression. The railway carriage derives from the stage coach, the motor car from the cab; it is only when the conditions are absolutely unprecedented that we get (as in the aeroplane and submarines) entirely new shapes. We resent novelty until we understand the purport of it. That is what makes it so difficult for a layman to appreciate a new building properly. The novel features disconcert him, whilst the clean, fresh appearance of the new work has its charm. But without some steady canons of criticism, some elementary tests, his estimate may be of no value. The novel features may be useless, or merely for advertisement, whilst the fresh cleanliness must in a short time disappear.

But before one attempts to define what these canons of criticism should be the public should instruct itself as to what it really wants. In the early part of the last century the public—that is, the public that counts—was deeply stirred over the condition and attitude of the Church. The Oxford Movement attracted the finest spirits of the time, and their able propaganda made the way easy and inevitable for the Gothic Revival. Carlyle, with his *French Revolution, Past and Present*, and lectures on Hero-worship, accentuated the teaching of Kingsley, F. D. Maurice, Dickens, and Charles Reade; Madox Brown and the Pre-Raphaelites gave, indirectly, their memorable support; Ruskin roused the glowing torch into flames, far-reaching, intensely illuminating. In this tide of emotion few could rest unstirred—its waves permeated remote parsonages, into the quiet retreats of country houses, where the good man, in his well-appointed home and with his comfortable surroundings, never suspected that there was anything essentially amiss with the English legislation and management of affairs, ecclesiastical and social, no matter what the French nation and the rest of Europe had to complain of in theirs.

On the crest of this great wave of resolution to purge the dark places of our moral and social betrayal of our civic responsibilities came the Gothic Revival—the desire and the need to set our house in order, and, in the first place, the structure of our churches. In the newly awakened zeal too much, we now see, was done. The broom was too vigorously applied. Apart from repair, restoration was widely carried out, and a kind of ruthless logic was allowed to play upon cathedrals and parish churches. Architecturally the Revival failed. It was—it is—impossible to recall the conditions under which the buildings arose, impossible to reproduce the features that time, neglect, and violence had mutilated and destroyed. The whole fabric of society had altered: the very terms on which mediæval buildings were based had passed away: the craftsmen in the various building trades were no longer co-operators: at best, plausible reconstructions, reproducing some of the ideals of the

medieval builders, were all that were possible. Ruskin's famous chapter in *The Stones of Venice*, "On the Nature of Gothic," showed eloquently the true key to the reasons for this inability. For all that, we owe a great debt to the architects of the Victorian epoch. Their passionate desire for sincerity in building remains with us to this day. We may disagree with regard to the forms which they considered vital, and which to us seem merely forms of expression incapable of being reproduced in their original sense, but the underlying spirit of honesty, of direct subservience to the facts of the case, is discernible in the best work of our time. The tide ebbed, as all tides do. The discoveries of science, the widespread introduction of machinery, the researches into the origins of life and development of species, the "higher criticism" of the Scriptures, have had their effect and rendered the attitude towards authority a more rarified and individualistic matter. Our duty towards our neighbour remains, however, a clear-cut thing, about which there is no doubt, except as to one's ability to perform the whole of it. And I take this matter of caring that things should be rightly done is one of prime importance to ourselves and to our neighbours. Observation begets care, and care is the core of human feeling. When we truly look upon a thing made we look past the object and think of the brains, the heart, and the hands that went to make it. The more we inquire into its history, the more we are able to pronounce upon the degree of goodness or badness there is in it. If we take a bit of cabinet work, for example, we can judge from the degree of finish how far the craftsman was enabled to enjoy his delight in his workmanship, or whether the elements of time in execution and cost checked his pleasure. We can guess, from sympathy, how far the making a copy of some old-fashioned piece diminishes his pride in the beauty of the work; we can pity the poor drudge who is only permitted endlessly to turn out some portion only of the entire work—not as part of his apprenticeship, but as his life's work—and with these criteria in our minds, we can appreciate the finished article and feel secure in our verdict. This exercise of observation will find material for reflection on more recondite examples. We pass by daily, let us say, the Abbey at Westminster, and cast not a thought on that rank of stolid, unpretending flying buttresses that are steadily, ceaselessly holding up the fabric that is our pride. Some may think, perhaps, that they are put there to break the long flank walls into compartments, and perhaps to frame pleasantly the great clear-story windows. But their task is far other than that. On them depends whether the vaults of the nave shall retain their solemn magnificence or shall fall in shapeless ruin on the Abbey floor, bringing with them ghastly destruction of wall and window. I can, perhaps, bring their function before you more clearly by describing it in terms other than the equilibrium of inanimate forces. Let us

conceive the situation in terms not of stone, but flesh and blood. We will suppose that you have, behind the bolted door of his cage, a hungry, powerful tiger, who is doing his furious best to come out. The bolts, proving plainly inadequate to keep the door closed, a smith is sent for, who with his tools shall make the fastenings secure. The smith comes, and sees that it is too late to attempt any strengthening of the bolts; there is nothing, in fact, to be done but for him to apply all his bodily force against the door to keep it shut. The weight of his tools, in the bag slung over his shoulders, contributes some help, but there the situation remains; he can expect no other person to come to his help or his relief. Occasional sips of beef-tea may be handed to him, and some patches put on his clothes, by persons too weak and inconsiderable to take any part in keeping the door closed against the tiger. That is comparable strictly to what these imperturbable buttresses have been doing for near upon 700 years. The tiger is the pressure of the great vault, striving to overthrow the buttress. The buttress is the man, the flying arch his arms, and the pinnacle that tops the buttress is the additional weight of the smith's bag of tools. Now think of the problem these medieval builders confidently set themselves: think, too, of the encouragement they received from the people amongst whom they worked—more than encouragement; each fresh undertaking was urged to be an advance on the last. What the buttresses have to withstand at Westminster is mere child's play to the work the buttresses have to perform at Amiens or Beauvais. Public opinion was unanimous in furthering the mason's work, the craftsman's skill; high and low, rich and poor, were eager to make sacrifices of land, money, and time for the triumphs they were bent on securing. Then came the calamity of the Black Death and a hiatus of some years in the course of building. There was dissension in men's minds. The nation was shaken by the awful visitation; there were great searchings of heart; people were stirred by the teaching of Wyclif and his followers; Parliament advocated repression, the Lollards preached revolt. And the ecstatic spirit that animates the architecture of the thirteenth century fades from the stonework. The Church was still a mighty power and its hold on men's minds was great and widespread, but allegiance to it was no longer uncritical. The building craft organised itself into guilds, independent of Church domination, and technically progressed steadily in dexterity of craft. Gloucester Cathedral is almost a miracle of stone carpentry, and in Henry VII's Chapel we have the culmination of the mason's art. But the chapel is to the honour and glory of a monarch—not St. Peter. The sculptured decoration in the transepts of the Abbey are angels of extraordinary majesty, images, so far as men could conceive them, of the celestial hierarchy; the sculptured decoration of the chapel—by means of the rose, portcullis and pomegranate—set forth

the lineage of the dead king, the attributes of his earthly pomp. So it is with the shrines within the Abbey walls. They testify to the earthly greatness of the corpse within the coffin, and instead of the angel bearing to the throne of the Almighty (as in the triforium of the angel choir at Lincoln Cathedral) the soul in all its humility, naked and divested of its earthly claim of consequence, we have, in the Percy shrine at Beverley, armed retainers displaying the blazoned shields of the dead warrior, as his title to proper recognition on the Judgment Day. How far public opinion sympathised with this personal expression of military heroism and individual prowess it is difficult to assess, but the contrast between the two modes of expression is unmistakable. From henceforth—owing partly to the emergence of the sculptor from the masons' guild—the aim is portraiture, to fasten on the everyday appearance of the person commemorated, to portray the actual likeness of the deceased, surrounded often by the members of his family. Public opinion acquiesced in this method of commemoration—even the humble mason tried his hand at portraiture—and eventually (since his efforts had only doubtful success and the expense of having fine sculptor's work prohibitive) subsided on the symbolism of urns, palm branches, laurels, and broken columns. There has been a most unfortunate revival of the mortuary mason's craft, and nearly all our churchyards are eyesores in consequence. The introduction, in countless quantity, of exotic white marble, attended by exotic shrubs pretending to be cypress, makes a graveyard a place to shudder at. The panoply of mourning is gradually, though slowly, departing. The helmet and spear—the achievement—disappeared owing to the introduction of gunpowder on the field of battle. The "hatchment"—its successor—no longer on the house front indicates the passing away of the owner of the coat of arms displayed, and, after its twelve months' testimony, is then transferred to the walls of his parish church: the "gompfer men" (gonfaloniers) attending the hearse are becoming a rare spectacle. The chamber of death is no longer hung with black and illuminated only by candles—except for those of very high degree—and we may hope, I trust, that with the more general practice of cremation the ashes of our dead will find a more suitable interment and memorial. In the press and in the pulpit, as well as in individual effort, I look for the education of public opinion. It will be easy, I think, if we make a start on elementary principles. It will be admitted, in these democratic days, that we have duties, as citizens, beyond our immediate circles; how, then, can we permit the squalor and filth in our streets that we would not for an instant tolerate within our doors? Are we so careless of our health and bodily maintenance that we must travel through avenues of shrieking advertisements defacing the countryside? Already there is a movement against this latter infliction, and if only we could get to care

about the things we glibly talk about, the battle would be won. We could put a useful check on the abuse of the wonderful powers of machinery. We should limit its action to producing the necessary articles of life, and forbid its manufacture of luxuries. A cup and saucer, or a plate, for example, can well be made by machinery; but if it is to be decorated, the painting should be done by hand. A sideboard can be made substantially by machinery; but if there is to be any ornamental carving, that should be done by hand. The justification of superimposed decoration is to please the eye and touch the imagination, and how can a soulless imitation of such forms by a machine satisfy these demands?

But if the eye is trained to scrutinise and consider the value of these accessory machine-made details, it will come to the conclusion that there is no real gratification to be got from them: that they have added to the expense but not the value of the object, and that it is due only to an unthinking custom that their presence is held to be *de rigueur* there. If this surveillance was constantly on the alert, what a quantity of trash would be spared! The brains, the money, the labour spent in devising and constructing these complicated ingenious machines, so capable, so misconceived, and so misused, could be so much better spent in encouraging actual handwork—encouraging work that should be a pleasure to do, that had life in it, that was a pleasure to contemplate. It is time that we came to the conclusion that man should be the master, not the slave of his tools. We cannot do without the help of machines, but we can temper their inexorable demands. It is being discovered after a century of probation, of ever-increasing slavery, as the machine-work increased in complexity and insisted on more rigorous attendance, that anything which detracts from the joy of work eats up profit—profit belonging to the workers as well as profit belonging to the employers of these workers. This rebellion against the tyranny of the machine, and repudiation of its extreme claims, means that it will no longer pay to subordinate your abler craftsmen to the pace of the machine. They are highly skilled and they are masters of their implements. Their output represents their craft—that is to say, their pride in their work.

I am not unmindful of the fact that of recent years there has been a great awakening of man's duty to his fellows. The sense of civic duties and responsibilities has called into being many societies for the improvement of town and country, and I am here pleading for their furtherance. They want help—the help given by a strong and wide co-operation in their aims; and they also want help financially. But the bulk of the populace does not support them—very largely, I think, on the grounds that they do not see how they themselves can take any part in the matter. They feel that the problem is beyond the individual's capacity, and that they do not know in which direction to move. To them I would say:

Begin by using your eyes. Devote some small fraction of your time to the aspect of our thoroughfares, and make up your minds whether you are satisfied with them or not, and, if the verdict is against the present state of affairs, what the improvement is you would like to see. I do not suggest that any sudden call for decency and order in our streets is likely to ensue; but I think a general dissatisfaction would be the beginning of an intelligent reform. Meanwhile the same force of observation should be directed on the objects immediately surrounding us, and on our homes. Subject every article that you possess or propose to buy to the test given by William Morris—is it useful, or do you believe it to be beautiful? I have tried to explain that there is a moral obligation incumbent on us in our discrimination over our expenditure, not by careless indifference to encourage the production of trash, or articles ill-made, on the grounds that we are by such patronage inflicting a useless, and therefore needless, drudgery on the poor mechanic employed in their production. Be sure that the workman realises the futility of his work more keenly than ever the purchaser does, and resents accordingly the misuse of his labour: on the other hand, appreciation of work well considered, well wrought and finished, removes the sense of drudgery over the task and converts the toil into a pleasure in finding his pride in his work is recognised by the purchaser. It may be objected that the cost of articles fashioned under these conditions must necessarily be considerably increased. It must, of course, be so. But we must bear in mind that we—most of us—surround ourselves with an unnecessary quantity of objects that give trouble and expense to maintain, and that we cannot honestly say contribute to our enjoyment of life: that we allow to be foisted upon us machine-made articles modelled on handmade forms: and to make these machines turn out their wares to such a standard is a misprision of their qualities, and an expensive one to boot. Machine-made stuff should look machine-made. The alleviation from the soulless rectitude of the machine must be acquired by the intelligent selection of the material used—the inherent qualities of colour, variety, lustre, and so forth; in the case of tiles the accidents of the kiln as regards colour and glaze do much to mitigate the uniformity provided by the machine. There should be no competition—in appearance—with handmade stuff. Of course, in the matter of preparation of material the machine is a useful, necessary helper. But if the powers of the machine were honestly, openly accepted, if the design of the products arose frankly from the qualities of the machine and its reasonable capabilities, those products could be turned out more cheaply than they are at present. When once we begin to care (in the sense I have been using) about the objects within our walls, we shall quickly proceed to care about those that are

without—the streets of our cities and the buildings that line them. The attention bestowed on these matters is not necessarily a painful duty; it has its repayment. It increases our interest in the world around us; it enlarges our outlook on humanity; it brings home to us how much our comfort and pleasure in life are created by the handiwork of others, how much of it is a direct appeal to us, and how churlish it is of us to disregard it. The value—the worth—of public opinion is the amount of passion there is in it. The force of public opinion is another matter; its effect is more immediate and more easily seen, and, unless there is an ideal impelling it, its effect can only be transitory.

The ideal must be a high one and it must be a comprehensive one, shared by high and low alike. In our time the Board schools, public libraries, hospitals, and convalescent homes testify to an ideal—that no one, no matter what his or her station in life may be, shall, for want of money or opportunity, go uneducated or uncomfortable. This ideal of citizenship needs to be carried farther. We have a country to be proud of; let us keep it so. We have cities we should be proud of; let us make them so. We all have our parts to play in the furtherance of this ideal; let us be constant in doing, all of us what we can, as befits a great people.

MR. F. R. YERBURY'S PHOTOGRAPHS AT THE A.A.

In the present exhibition of photographs at the Architectural Association we are struck by the artist's outlook, in many cases rather the outlook of a painter. There is a fine quality of colour and composition, an appreciation of form and tone, and still more a sympathetic understanding of subject. This latter is particularly evident in the general architectural work, in such views as Bruges, Versailles, Whitby, Rothenburg, etc. In the architectural work of more "detailed" type, the detail, though sufficiently clear, is subdued to preserve the general character of the subject, as may be seen in the photographs of Syon House and other interiors. The lighting effect, too, in some of the interiors is excellent. The exhibition is not limited to architecture, but contains many very good landscape studies and portraits. The technique and the quality of the work show that architecture may be recorded with an appreciation of its qualities, so often lost in the harsh and highly varnished photographs with which we are so familiar.

L. H. BUCKNELL [A.].

SCOTTISH ARCHITECTS' CHARTER.

It has been announced in the *London Gazette* that the King has granted a Charter of Incorporation to "The Incorporation of Architects in Scotland."

Exhibition of British Architecture at the Salon des Artistes Français

By J. GODEFROY, S.A.D.G., VICE-PRESIDENT (ELECT) OF THE FRANCO-BRITISH UNION OF ARCHITECTS, ETC.

We are particularly happy to find in our "Salon" this year the works of British members of the Franco-British Union of Architects.

The benefit which we derive from the participation of our British friends in our exhibition lies in what we may learn from them. In like manner, when we send our works over to England, they may gain something of value by asking themselves what are the particular qualities which inspire our work, and what may be learned from our exhibits. It seems to me that what we should chiefly note and admire in the British exhibits as a whole is the scrupulous honesty with which our British colleagues interpret their buildings. They carefully avoid any showy rendering; there is no straining after effect. They are right; art has nothing in common with artifice.

Our British confrères make very general use of perspective in the representations of their buildings: they always adopt a view point which is in conformity with practical possibilities, and therefore the ordinary man can understand their drawings; whereas our enormous geometrical drawings are only understood by experts, which is obviously not what is required for the Salon. I should add that their water-colour drawings are delightfully fresh and brilliant, which makes it easy to appreciate their gardens, their cottages, etc.; but perhaps the climatic conditions have something to do with this? They have also notable gifts in pen drawing, and a talent for architectural sketching.

It is, of course, impossible to analyse each and all of the works exhibited. I would desire nevertheless that some of them should have a permanent record: that we should remember, for example, the delightful perspectives of the monumental staircase of Messrs. Blow and Billerey, which gives a sincere impression of reality. I shall make but one slight criticism, which I trust my confrères will accept in good part; there is at the difficult junction between the "string" of the staircase and that of the landing a *cartouche* which appears to have its only justification in masking this junction, always a difficult problem. I also venture to think that the country house represented by a drawing which imitates a tinted engraving is rather *triste*.

It is again largely due to the excellent perspective drawing added to a sober imagination that the accurate reconstruction of Præneste (Palestrina) by Mr. Chalton Bradshaw owes its charm. In these drawings the author shows us his first "*envoi de Rome*." The foundation of a *Grand Prix de Rome* is of quite recent date in England, and Mr. Bradshaw was the first to win this prize. This

is indeed a happy portent for his successors, who will benefit by the advantages of the high standard he has set.

Sir John Burnet, a pupil of our master Pascal (and a corresponding member of our Institut), shows in one of his exhibits a building of ten storeys and a total height of about 150 feet. We appreciate the restraint of this design, in which the decoration is concentrated in the upper part of the building. One cannot doubt that this block, which is to be built on the banks of the Thames, adjoining London Bridge, will be in harmony with the majestic panorama of the great river, where the buildings contribute so largely to the distinctive character of the English capital. The water-colour drawings illustrating Sir John Burnet's work are distinguished by great technical ability, especially one representing the restoration of the great hall of Merchant Taylors' Company. We notice also a reconstruction of an ancient castle, indicated in pencil drawings; a country hotel and a village church, in which the effect of the drawings is enhanced by a sober and harmonious touch of colour. This notable collection is completed by a design for "a Hospital for Sick Children" in Scotland.

Next to this important exhibit, which has such charming qualities, we find the work of an old student of the Beaux Arts School, Mr. Arthur J. Davis, one who has left with us the happiest recollections. Although an Englishman, he has so absorbed the spirit of our School that he really appears to be a living embodiment of the Franco-British Union. His reconstruction, for example, of a London bank, won in a limited competition, is marked by strong French feeling. We would perhaps have preferred this "rendering" had it been a little less severe and cold. He had, it appears, the original idea of using a photograph of the existing surroundings of the new building, to which he added a perspective drawing of the building itself with the same tone values, and had the whole photographed in such a way that we have the curious illusion of a photograph taken before the building has been erected. As regards the plan of the edifice, this is shown without any straining after effective presentation: its conception is at once logical and practical. The façade of a London street front also shows great sincerity in the draughtsmanship and shading: we have in this drawing one of the best exhibits in the Salon.

Mr. Guy Dawber is able to make us breathe the very atmosphere of intimacy of the home of an English family in his drawings of country houses.

The representation of a small country house designed

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by Mr. Cyril Farey, shown in a bird's-eye view, suggests the same qualities. We also notice his perspective of an imaginary scheme for the residence of a royal prince, which a plan assists us to understand.

Sir Banister Fletcher, Chevalier de la Légion d'Honneur, is not only an architect of distinction, but has been also a Sheriff of the City of London. To be at the same time an architect and a sheriff must require a variety of qualities. He shows a monument to his father, the late Professor Banister Fletcher, and a bank in the provinces, notable for the precision of the drawing and rendering.

What shall one say of the little suburban residence by Mr. Henry M. Fletcher except that it is so attractive that one would like to live in it?

Mr. Arthur Keen exhibits a war memorial tower and the design for a village club with a meeting room and ballroom, where the artistic character is happily blended with the practical needs of an industrial district.

Sir Edwin Lutyens, R.A., has sent a drawing of the Theosophical headquarters in London which has great interest. His home for disabled soldiers is illustrated in a fresh water-colour drawing, which is equalled for ability by another of a country house with a field of marguerites in the foreground. There is also his design for a memorial church, of which the Roman character is striking. But it is perhaps the scheme for a memorial to King Edward the Seventh in Trafalgar Square which is the most effective design. It harmonises with this famous square as though it were the necessary completion for which it is waiting.

The posthumous exhibition of certain works of Mr. Ernest Newton, R.A., cannot fail to touch the hearts of those who, like myself, knew this distinguished man, who never failed in proofs of friendship and admiration for France. He was unfortunately taken far too soon from those who knew and appreciated him. He brought a sure knowledge and taste to the problem of the country house. We prefer in France to make our homes in town in flats or private houses; whereas our English friends give all their thought and care to the country house, where all that can be devised for comfort or convenience is contrived.

It is by methods closely allied to our own that Mr. A. N. Paterson—an old Pascal man—illustrates a Town Hall in a Scottish city. The style suggests the Flemish, but we admire the perfection of the detail and the perspective of the council chamber.

Professor C. H. Reilly is the director of the Architectural School of Liverpool University. As he is devoted to his school, it is quite natural that his thoughts should centre on its extension, of which he shows a perspective view. Near by we see his scheme for the interior decoration of a London church, and here are manifest his feeling for colour and the modern tendencies which inspire his work.

Mr. Gilbert Scott, A.R.A., whose name recalls his famous ancestor, shows a church which one might almost take for a restoration of an ancient building instead of an original design.

Mr. John W. Simpson's exhibits comprise extensions to two public schools, of which one is of an ancient style of architecture, in harmony with the existing buildings, while the other is French in character. He also shows clever pen drawings of a medium-sized country house and two cottages.

Mr. John Slater has sent drawings of some small cottages, which remind us of those which are rising in our devastated regions, and a scheme for a draper's shop.

Mr. Howard Robertson, S.A.D.G., excels, as is his wont, in pen drawings, but this year he shows us only a part of what he can do.

Mr. Raymond Unwin's exhibit suggests that it is the work of a specialist in the design and execution of small houses for the "petit bourgeois" and the workman. He knows how to group these modest dwellings so that they form a harmonious whole, and at the same time are cheaper to build than if isolated. Here we see a delightful plan, of which the effect is shown in a perspective view.

Mr. Paul Waterhouse, P.R.I.B.A., shows a small island in the middle of a stream. We can realise that our eminent colleague has adapted his composition to the existing buildings. A bridge leads to a gate of mediæval aspect: a group of buildings where the interior must surely breathe a reposeful calm, such as would be suited to the habitation of some philosopher. All this is conveyed in a clever water-colour drawing.

Our friend Mr. Cart de Lafontaine endues his compositions with imagination and thoughtfulness rather than seeks to impress us with their graphic representation. His art is sober, there is nothing in it without purpose: he illustrates in architectural terms the teachings of the great Frenchman whose name he bears. What appears, above all, to interest him is the realisation of a design. Here he shows us some executed work designed to commemorate the glorious dead of our country and of his own, such as a monument to French prisoners who died in exile in the time of the great Napoleon; a memorial erected by an English family to the memory of a son killed in the war, with sympathetic symbolism—a cross supported by two figures, those of David I., King of Scotland, and the Archbishop Anselm of Canterbury, the patron saints of the young hero. He has also sent the design for a large scheme for the architectural adornment of a British war cemetery in the Somme for the British Government (Imperial War Graves Commission). Originality, marked by a spirit of piety such as one would expect in a project of this kind, characterises this composition. But a closer inspection reveals that prac-

tical considerations have not been neglected—there is a shelter where visitors may take refuge from the rain or retire for meditation. In the centre of the design stands the Great War Stone, destined to mark this place as sacred ground if all trace of the cemetery itself should one day disappear.

This scheme for a British cemetery on the old battle line brings to our minds once again the depths of feeling which are touched by the drawing together of the architects of the two countries represented to-day by the Franco-British Union. If we could voice a hope, it would be that all the other intellectual groups should follow our example. Why should not our engineers, our "savants," and our men of letters do so? If the day comes when the intellectual classes of our two countries know each other more intimately, appreciate each other better by frequently meeting together, thus promoting cordial friendships, then they would be able to exercise a beneficial influence and avoid the roads which lead to the ever-present and menacing peril of separation.

Our British confrères have demonstrated in this exhibition of their works their belief in the Union, and the most eminent men amongst them have not hesitated to take part in this demonstration, and by their participation have given it that lustre which our friends rightly desired should mark their effort. It is now for us, in our turn, to send our works to London to show our friends what we can do. It is therefore to be hoped that we should not be represented only by our younger men, as was the case in 1913, but that our masters of modern French architecture should also participate, as their British colleagues have done in this exhibition.

—(Translation.)

Obituary

MR. ARTHUR WILLIAM COOKSEY [F.].

Mr. Cooksey, who died suddenly, was born in 1865 and educated at University College School and University College, London. He was articled to Mr. E. M. Whitaker [F.] in 1884, and qualified as an Associate R.I.B.A. in 1888, being the youngest Associate of the year. After studying in Italy Mr. Cooksey started practice as an architect and became a Fellow in 1910.

Among the appointments he held were those of architect to the Borough Market Trust, the Corporation of the Wardens of St. Saviour's, Southwark, Newcomen's Foundation, Sir John Cass Foundation, and Whitechapel Foundation. Among the chief works from his design were the Sir John Cass Technical Institute and Schools, Aldgate; various offices in London and abroad; additions to the Northern Polytechnic and Hackney Institutes and the Science Block of the Whitechapel Foundation School; factories (especially during the war); and the War Memorial at Leigh, near Tonbridge. He was an authority on ancient lights, and was frequently called as an expert witness in disputes. His London office was at 6 Adam Street, Adelphi.

For his devoted services in connection with the Belgian

Relief Committee during the war he received from the King of the Belgians the Order of the Crown of Belgium with Palm, with special permission from the King to wear it on State occasions.

MR. DAVID CHRISTIE [Licentiate].

The death of Mr. David Christie, Licentiate R.I.B.A., took place at his residence, Ferriby Road, Hessle, East Yorks, on Tuesday, 16 May, at the age of 58. For a period of thirty years he held the office of architect and surveyor to the Corporation of the Hull Trinity House, and for twenty-one years lectured on building trades subjects at the Hull Education Committee's evening classes, an appointment he relinquished about ten years ago. His readiness to assist at all times the younger architects of the city, by placing his extensive knowledge and experience at their disposal, won for him many friends, and by his death the city of Hull has lost a respected and much esteemed member of the architectural profession.

The Annual Elections

SCRUTINEERS' REPORTS.

The results of the Annual Elections are recorded in the subjoined Reports of the Scrutineers, which were read at the General Meeting on Monday, 12 June.

The Scrutineers appointed to count the votes for the election of the Council and Standing Committees for the Session 1922-23 beg to report as follows:—1,339 envelopes were received—461 from Fellows, and 878 from Associates. The result of the election is as follows:—

COUNCIL, 1922-1923.

PRESIDENT.—Paul Waterhouse (unopposed).

PAST PRESIDENTS.—Sir Reginald Blomfield (unopposed); John William Simpson (unopposed).

VICE-PRESIDENTS.—*Elected*: H. D. Searles-Wood, 760 votes; A. W. S. Cross, 751; George Hubbard, 704; C. H. Heathcote, 648.—*Not Elected*: H. T. Buckland, 539; E. Guy Dawber, 505; Professor S. D. Adshead, 402; W. Curtis Green, 397; H. P. Burke Downing, 218. 1,338 papers were received, of which 16 were invalid.

HON. SECRETARY.—Arthur Keen (unopposed).

MEMBERS OF COUNCIL: FELLOWS.—*Elected*: C. B. Flockton, 861 votes; Sydney Perks, 834; W. Gillbee Scott, 773; W. E. Riley, 764; C. Lovett Gill, 744; G. Topham Forrest, 727; Max Clarke, 722; W. W. Scott-Moncrieff, 691; J. A. Swan, 687; W. G. Hunt, 651; Major Harry Barnes, M.P., 648; Herbert Shepherd, 634; J. Alfred Gotch, 633; Delissa Joseph, 633; A. O. Collard, 625; Heaton Comyn, 622; Sir Edwin L. Lutyens, 620; Percival M. Fraser, 589.—*Not Elected*: Albert W. Moore, 570; E. B. Glanfield, 565; Walter Cave, 501; Gilbert W. Fraser, 496; Maurice E. Webb, 461; A. W. Hennings, 450; Sir Banister F. Fletcher, 436; H. Austen Hall, 430; E. Stanley Hall, 428; Alan E. Munby, 428; W. R. Davidge, 397; T. Taliesin Rees, 397; O. P. Milne, 384; E. Vincent Harris, 376; H. V. Ashley, 370; Arthur J. Davis, 350; F. T. W. Goldsmith, 350; Edward Maufe, 298; Charles Nicholas, 190; J. H. Kennard, 184. 1,338 papers were received, of which 79 were invalid.

ASSOCIATE MEMBERS OF COUNCIL.—*Elected*: W. H. Ashford, 712 votes; Digby L. Solomon, 684; Frank Woodward,

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665; Arthur Welford, 622; H. G. Fisher, 618; L. A. Culliford, 588.—*Not Elected*: W. G. Newton, 483; Professor Patrick Abercrombie, 416; Michael Waterhouse, 372; J. Alan Slater, 362; G. C. Lawrence, 357; Herbert A. Welch, 320; H. Chalton Bradshaw, 317; L. H. Bucknell, 271; Lieut.-Col. H. P. Cart de Lafontaine, 257; P. W. Hubbard, 176. 1,338 papers were received, of which 46 were invalid.

REPRESENTATIVES OF ALLIED SOCIETIES.—Edward Thomas Boardman (Norfolk and Norwich); Francis Jones (Manchester); James Lochhead (Glasgow); Thomas Ridley Milburn (Newcastle); Eric Morley (Leeds); Percy Morris (Devon and Exeter); Rupert Savage (Birmingham); Percy Thomas (Cardiff); Edward Prioleau Warren (Berks, Bucks and Oxon) (unopposed).

REPRESENTATIVE OF THE ARCHITECTURAL ASSOCIATION.—Stanley Hinge Hamp (unopposed).

HONORARY AUDITORS.—John Hudson; Arthur William Sheppard (unopposed).

Scrutineers.—C. H. Brodie (Chairman), Henry A. Saul, Sydney Tatchell, Michael Tapper, Henry Lovegrove (Vice-Chairman), F. J. Toop.

ART STANDING COMMITTEE: FELLOWS.—*Elected*: H. V. Lanchester, 839 votes; Sir Edwin L. Lutyens, 833; Halsey Ricardo, 721; Professor C. H. Reilly, 693; Professor S. D. Adshead, 675; Walter Cave, 671; Professor F. M. Simpson, 660; Ralph Knott, 650; Professor A. E. Richardson, 650; William Walcot, 605.—*Not Elected*: Herbert Baker, 577; W. A. Forsyth, 552; Walter Tapper, 514; Maurice E. Webb, 477; W. R. Davidge, 370; Alfred Cox, 362; F. R. Hiorns, 300; F. C. Eden, 272; J. D. Coleridge, 245. 1,167 papers were received, of which 23 were invalid.

ART STANDING COMMITTEE: ASSOCIATES.—*Elected*: Cyril A. Farey, 928 votes; T. S. Tait, 895; L. H. Bucknell, 877; Michael Waterhouse, 823; Percy W. Lovell, 800; Arthur Welford, 800.—*Not Elected*: A. R. Powys, 765. 1,167 papers were received, of which 29 were invalid.

LITERATURE STANDING COMMITTEE: FELLOWS.—*Elected*: Martin S. Briggs, 773 votes; Major Hubert C. Corlette, 771; H. M. Fletcher, 763; H. H. Statham, 755; C. Harrison Townsend, 755; Arthur Stratton, 754; D. T. Fyfe, 715; E. Stanley Hall, 710; Louis Ambler, 698; Charles S. Spooner, 680.—*Not Elected*: Stanley C. Ramsey, 670; H. Austen Hall, 666; W. Henry Ward, 653; A. H. Moberly, 538; Harry Sirt, 395. 1,167 papers were received, of which 22 were invalid.

LITERATURE STANDING COMMITTEE: ASSOCIATES.—*Elected*: J. Hubert Worthington, 777 votes; J. Alan Slater, 767; H. Chalton Bradshaw, 680; George Drysdale, 611; C. Cowles-Voysey, 584; W. H. Ansell, 574.—*Not Elected*: L. B. Budden, 561; A. T. Edwards, 483; Hope Bagenal, 436; C. E. Sayer, 383; G. D. Gordon Hake, 332. 1,167 papers were received, of which 21 were invalid.

PRACTICE STANDING COMMITTEE: FELLOWS.—*Elected*: Sydney Perks, 750 votes; Arthur Keen, 737; Max Clarke, 707; John Slater, 669; W. Gillbee Scott, 665; G. Topham Forrest, 613; Delissa Joseph, 582; Wm. G. Hunt, 581; Henry V. Ashley, 556; A. O. Collard, 531.—*Not Elected*: T. R. Milburn, 518; D. Barclay Niven, 494; G. H. Lovegrove, 473; Rupert Savage, 468; Francis Jones, 460; W. Henry White, 391; Frederick Chatterton, 344; W. H. Atkin-Perry, 336; Harry Teather, 299; Charles Nicholas, 238. 1,167 papers were received, of which 31 were invalid.

PRACTICE STANDING COMMITTEE: ASSOCIATES.—*Elected*: Horace Cubitt, 828 votes; G. Scott Cockrill, 753; J. Douglas Scott, 712; Digby L. Solomon, 708; H. V. Milnes Emerson, 686; Herbert A. Welch, 662.—*Not Elected*: G. Leonard Elkington, 633; C. E. Hutchinson, 578; C. B. Smith, 441. 1,167 papers were received, of which 13 were invalid.

SCIENCE STANDING COMMITTEE: FELLOWS.—*Elected*: W. A. Pite, 935 votes; H. D. Searles-Wood, 879; Alan E.

Munby, 872; H. Percy Adams, 861; Professor R. Elsey Smith, 751; Raymond Unwin, 687; W. E. Vernon Crompton, 686; Francis Hooper, 669; Herbert Shepherd, 616; C. A. Daubney, 607.—*Not Elected*: R. Stephen Ayling, 604; S. B. Russell, 563; J. E. Dixon-Spain, 515; J. Ernest Franck, 450; W. R. Jaggard, 426. 1,167 papers were received, of which 17 were invalid.

SCIENCE STANDING COMMITTEE: ASSOCIATES.—Robert John Angel, Henry William Burrows, John Hatton Markham, Harvey Robert Sayer, Theodore Francis Hansford White, Charles Woodward (unopposed).

Scrutineers.—C. H. Brodie (Chairman), Henry A. Saul, Sydney Tatchell, Michael Tapper, Henry Lovegrove, F. J. Toop.

SPOILED VOTING PAPERS

Ian MacAlister, Esq., R.I.B.A.,
9 Conduit Street, W.1.

DEAR MR. MACALISTER,—As Chairman of the Scrutineers conducting the current election, I have been again astonished at the number of voting papers we have had to reject for irregularities. In the case of the Council, for instance, there were no less than 79 papers we had to throw out.

The faults are that the correct number of names is not struck out, that names are struck out and the word "stet" written against them, or the name is re-written.

As writing of any kind which could identify the voter is obviously not permissible, all such papers have to be rejected by the Scrutineers, and my object in writing is to ask if you or the President, on Monday night, could make some announcement on this matter, pointing out to the members the necessity of carrying out the conditions under which they vote.

I would not trouble you, but, as you know, I shall be away, and unable to attend the meeting.

Yours sincerely,

C. H. BRODIE

Competitions

COMPETITION OPEN.

Auckland War Memorial.

The conditions and other documents relating to the above competition may be consulted in the Library.

COUNTY BOROUGH OF SOUTHEND-ON-SEA EDUCATION COMMITTEE.

NEW SECONDARY SCHOOL.

Architects are invited to submit competitive drawings for the erection of a New Secondary School at Westcliff. A premium of £150 is offered for the design considered by the Assessor to be the first in order of merit, and further premiums of £100 and £50 respectively for those placed second and third. The professional Assessor is Mr. George H. Widdows, F.R.I.B.A. A deposit of £2 2s. will be required for the plan and conditions of competition, to be returned on receipt of a bona fide design, etc. All enquiries with reference to the competition must be sent to Mr. H. Farrands, M.A., Director of Education, Education Offices, Southend-on-Sea, not later than 30 June 1922.

Members' Column

PARTNERSHIPS.

A.R.I.B.A. (1911), with moderate capital and wide experience in London and the provinces, wishes to obtain Partnership in an established and expanding firm. Used to responsibility. At present chief draughtsman (since demobilisation in 1919) in busy office.—Reply Box No. 381, c/o Secretary R.I.B.A., 9 Conduit Street, W.1.

A.R.I.B.A., etc., with first-class connection, wishes Partnership or working arrangement with first-class London firm.—Apply Box 9622, c/o Secretary R.I.B.A., 9 Conduit Street, W.1.

ASSOCIATE (aged 32) wishes to purchase a Partnership in an established practice in South or West of England, or to run a branch practice. Eight years' experience in various classes of work. War service, with commission in Royal Engineers.—Apply Box No. 962, c/o Secretary R.I.B.A., 9 Conduit Street, London, W.1.

LICENTIATE R.I.B.A. is desirous of Partnership in general country practice (preferably South Coast). Good experience in Domestic, School and Church work, Valuations, etc. Small capital.—Apply Box 1362, c/o Secretary R.I.B.A., 9 Conduit Street, W.1.

APPOINTMENTS WANTED.

ARCHITECT'S ASSISTANT desires post in London or provinces. Ecclesiastical and high-class Domestic work. Completed articles in the North. Age 26. Four years' War service.—Apply Box 924, c/o Secretary R.I.B.A., 9 Conduit Street, W.1.

CHANGE OF ADDRESS.

MESSRS. BURNETT AND MACPHERSON have removed their offices from 28 Regent Street to 94 Jermyu Street, St. James's, S.W.1.

WANTED.

AN ARCHITECTURAL ASSISTANT for the East. Must be an experienced man, sound in construction as well as design. Exceptional opportunity for the right man.—For full particulars apply Box 180, c/o Secretary R.I.B.A., 9 Conduit Street, W.1.

Minutes XVIII

SESSION 1921-22.

At the Fifteenth General Meeting (Business) of the Session 1921-22, held on Monday, 12 June 1922, at 8 p.m.—Mr. H. D. Searles-Wood, Vice-President, in the chair. The attendance book was signed by 10 Fellows (including 4 members of the Council) and 11 Associates (including 1 member of the Council).

The Minutes of the Meeting held on 29 May 1922, having been published in the JOURNAL, were taken as read, confirmed, and signed by the Chairman.

The Hon. Secretary announced the decease of Mr. Charles Clegg (Retired Fellow), elected Fellow 1877, placed on the list of Retired Fellows in 1919; and, on the motion of the Hon. Secretary, it was RESOLVED that the regrets of the Institute for the loss of this member be recorded on the Minutes of the Meeting.

The following candidates for membership were elected by show of hands:—

AS FELLOWS (10).

ANDERSON: ANDREW WHITFORD [*A.* 1884].
BRADDELL: THOMAS ARTHUR DARCY [*A.* 1920].
BROWN: WILLIAM EDWARD ARTHUR [*A.* 1904].
CROMIE: ROBERT [*A.* 1914].
CURTIS: WILLIAM THOMAS [*A.* 1904].
MOLE: CHARLES JOHNS, M.B.E. [*A.* 1909].
OWEN: GEOFFREY [*A.* 1912], Warrington.
RIDDEY: CHARLES [*A.* 1898], Kettering.
RIDDLE: ALAN WILFRID [*A.* 1909], Peterborough.
SOUSTER: ERNEST GEORGE WILLIAM [*A.* 1905].

AS ASSOCIATES (24).

ALWARD: WILLIAM WALLACE, M.Arch. [Special War Examination], Montreal, Canada.
ANDREWS: CYRIL DOUGLAS [Special War Examination].
BEAUMONT: JOHN SOMERVILLE, M.C., B.A. [S. 1921—Special War Exemption], Manchester.

CHEEK: ALFRED CYRIL [Special War Examination], Leicester.
CLARK: HAROLD GOUNDRY [Special War Examination], Darlington.

DAVIES: HAROLD HINCHCLIFFE [Special War Examination], Liverpool.

DAWSON: HARVEY ALEXANDER [Special War Examination].
HARRILD: FRED, M.A.Oxon. [Special War Examination], Totnes, S. Devon.

HAYWARD: JOHN HAROLD [Special War Examination], Glasgow.
JACKSON: HAROLD THOMAS [Special War Examination].

JENKINS: THOMAS TREVILYAN [S. 1922—Special War Exemption], Liverpool.

LAY: ARTHUR PURCELL [Special War Examination].

PRYNNE: HAROLD FELLOWES [S. 1921—Special War Exemption], Madras, India.

REEVES: JOHN EDWARD [Special War Examination], Birmingham.

ROBERTSON: ALEXANDER SMEATON [Special War Examination], Melbourne, Australia.

SADLER: WILLIAM [Special War Examination].

SAMPLE: EDMUND FRIEDRICH RONALD [Special War Examination], Hong Kong, China.

SEATON: WILLIAM GEORGE [Special War Examination], Pontypridd, Glam.

THOMPSON: CHRISTOPHER CRAIG [Special War Examination], Toronto, Canada.

THREAGOLD: ROBERT AINSLIE [S. 1914—Special War Exemption], Liverpool.

TOWNSEND: ARTHUR CECIL [Special War Examination], Liverpool.

VON BERG: WILFRED CLEMENT, M.C. [Special War Examination].

WHITLEY: CUTHBERT CLAUDE MORTIER [Special Examination], Victoria, Australia.

WILLMAN: JOHN HENRY [Special War Examination], Taunton.

AS HONORARY ASSOCIATES (10).

ASHBY: THOMAS, D.Litt., F.S.A., Director of the British School at Rome, Rome, Italy.

BELL: CHARLES FRANCIS, M.A., F.S.A., Ashmolean Museum, Oxford.

CLUTTON-BROCK: ARTHUR, B.A.

COCKERELL: SYDNEY CARLYLE, M.A., Director of the Fitzwilliam Museum, Cambridge.

CORNFORD: LESLIE COPE.

CRANAGE: Rev. DAVID HERBERT SOMERSET, Litt.D., F.S.A., Cambridge.

MONTGOMERY: HENRY GREVILLE, J.P.

NEW: EDMUND HOOT, Oxford.

PHILLIPS: R. RANDAL.

WELLER: HENRY OWEN, B.Sc., M.Inst.C.E., Director of Building Research.

The Scrutineers' Reports, giving the results of the Annual Elections of the Council, the Standing Committees, and the Hon. Auditors, were read, and the Chairman declared the Officers, Members of Council and Standing Committees, and Hon. Auditors duly elected in accordance therewith.

On the motion of the Chairman, a vote of thanks was passed by acclamation to the Scrutineers for their labours in connection with the Elections.

The Secretary read a letter from the Chairman of the Scrutineers on the subject of spoiled voting papers, and the Chairman directed that the letter be published in the JOURNAL.

The proceedings closed at 8.15 p.m.

Arrangements have been made for the supply of the R.I.B.A. JOURNAL (post free) to members of the Allied Societies who are not members of the R.I.B.A. at a specially reduced subscription of 12s. a year. Those who wish to take advantage of this arrangement are requested to send their names to the Secretary of the R.I.B.A., 9 Conduit Street, W.1.



THOMAS HASTINGS, LL.D.

ROYAL GOLD MEDALLIST 1922



The Royal Gold Medal

ADDRESS BY MR. PAUL WATERHOUSE, M.A., THE PRESIDENT

Presentation to Mr. Thomas Hastings, Honorary Corresponding Member, R.I.B.A., at the General Meeting, Monday, 26 June 1922

IT will be of very little interest to Mr. Hastings to be told that he has been the author of 50 works of really cardinal importance, that six or more of these were of parliamentary or municipal rank, that among the remainder are libraries, university halls, banks, railway stations, hotels, bridges, monuments, as well as vast town-planning schemes; or to be reminded that the buildings so enumerated comprise only those which have been thought conspicuous enough to be put into a list. I have little doubt but that the unrecorded remainder would be sufficient to make two or three European architects contentedly rich and reasonably famous.

Nor will it greatly interest our guest to be told in detail of our appreciation of certain features of his work—of our recognition, for example, of the classic majesty of the New York Public Library, of our applause at his solution, in the New Theatre, of the ancient and ever-new problem of the columnar staircase, of our appreciation of the Bramante-like grace of his Long Island house, of our enthrallment by the studious simplicity of the Dupont and Guggenheimer mansions, of our perception in the case of the Ponce de Leon Hotel of a marvellous power to change the key of composition without loss of traditional chastity, nor of our respectful homage to the masterly Arc de Triomphe, which

he designed to celebrate the home-coming of the American troops.

All these things we should like to express, but the recital might be tedious to our visitor.

Hardest of all is it to me to refrain from some words of envious ecstasy about the poetic grace of the Arlington Amphitheatre.

But Mr. Hastings must by this time be sure of the message of his work, and sure of the reception of the message among the right people. So let us leave this aspect of our evening's work alone, save for the assurance, comforting to ourselves if unimportant to him, that as far as we know we *are* the "right people."

What may affect Mr. Hastings, and what does affect us, is the supreme significance in modern history of forty years' work such as his.

I am perfectly sure that the opening words of any reply which Mr. Hastings is good enough to give us to-night will be a modest disclaimer. He will say that we are asking our King to honour his epoch and his country, and that the allocation of this honour to his individual personality is a mere accident. Let him say so. He will not thereby shield himself from the direct attacks of our respectful homage, nor will he dilute or divert in any degree the enthusiasm with which we acclaim him as the man of the hour.

It is undeniably true that we are consciously applauding America of the twentieth century. But what of that? It is the architects of America who make American architecture, and in searching for a true and significant example of that group of creators we have—with very great, very careful deliberation—thrown our choice on Mr. Hastings. I think we will stand firm in support of our own judgment. Mr. Hastings can diffuse, as much as he pleases, our compliments among his able countrymen, so long as it is on his neck that the King's Gold Medal crosses the Atlantic, and so long as he is our most respectfully chosen ambassador.

The very fact that Mr. Hastings is surrounded in the States by confrères whose aims are his own, the very fact that there are others in his favoured country who may rightly be classed as of Gold Medal rank, only enhances, I hope, the honour which we try to pay to him and through him to his colleagues, many of whom are men to whom his example, his instruction, and his rivalry have meant much.

I make no apology for being, by the accident of the Presidency, the man through whose hands the medal passes from its gracious giver to its distinguished recipient. Rather do I with complete immodesty rejoice that so great a piece of good luck falls in my way, for I have wanted, above many other wants, to stand face to face with an American and tell him exactly what I think of the present-day school of American design in architecture.

I believe, with a very profound belief, that it represents a most significant fact in the history of our art. I do not say "of our age," but of that ageless company of centuries which, viewed from Art's point of view, stand not behind one another in series, but abreast. There is a reality called Eternity. Some define it as time with the beginning and the end removed. They define it falsely. It is the great Now. It lies with architects more than with other artists, it lies with artists more than with other men, to realise (and this is a realisation shared with religion) that the brotherhood of man has its extension forth and back in time no less than East and West in space.

This is not wandering on my part. I could make it plainer by detaining you with a history of civilisation (if I were capable of it). I would sooner try to make it plain by talking about the United States.

There is much heretic talk of progress in architectural design. There *is* progress, of course; but

there is much more evidence of the sham progress which is no friend of art at all. The horrible experiment to which a certain old-world country is submitting herself, the experiment of attempting an architecture "free from historic style," would be a nightmare to Europe and a grim menace to all lovers of the beautiful were there not a bright hope that so foul a conflagration will soon burn itself out.

Let us turn happy eyes to America and take to our hearts the remarkable testimony she gives to the divine sovereignty of tradition.

America is of all countries the land whose civilisation was unprejudiced—a vigorous population on virgin soil found itself free to look forward without any obligation to look back. There was the country of all countries in which could flourish unhindered and undismayed that traditionless architecture which is the dream of some of our philosophers.

But what has come to America in her freedom? What, after the early flutterings of untried wings, has been the direction of her flight? What star guided her? What voice prompted her? None other than the star of that civilisation which leads and has led old Europe, no voice but the voice of the ancients.

Gentlemen and ladies, were there ever wanting some proof that our happy bondage to the ways of our forefathers is not a bigot's delusion, but a free man's song of liberty, that proof is given to us by the choice of America—or shall I say rather by America's joyous submission to the golden chains in which we also labour?

In the name, Mr. Hastings, of our Gracious Patron, and as the spokesman of my brother architects of England, I transfer to you the greatest testimony we have to offer; and, in doing so, I thank you and your colleagues in America for the encouragement you give to our ancient art, and congratulate you with the warmest cordiality on the fact that your line of thought, your line of work, and your spirit of achievement are the very spirit, work, and thought that have for centuries bound into a timeless brotherhood the architects of Europe.

MR. THOMAS HASTINGS'S REPLY

While we Americans have inherited your language, and consequently have no right to complain, I must confess that on this occasion I find the English vocabulary quite inadequate—there are no words to express my grateful appreciation of the honour which His Gracious Majesty the King has



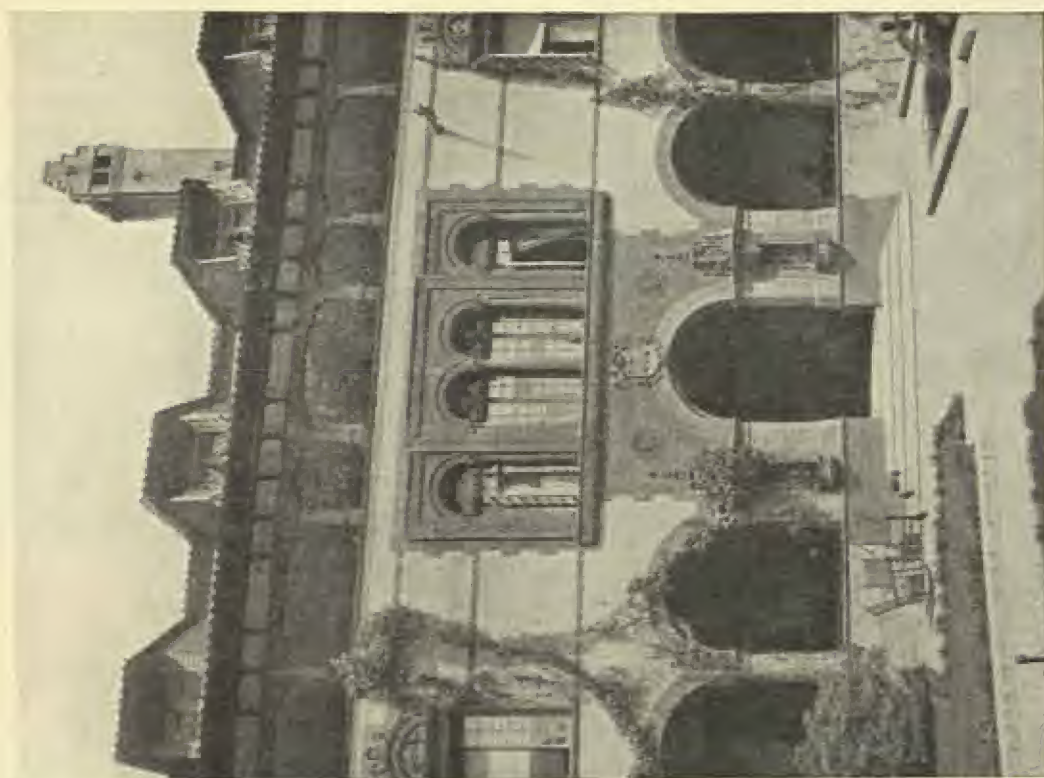
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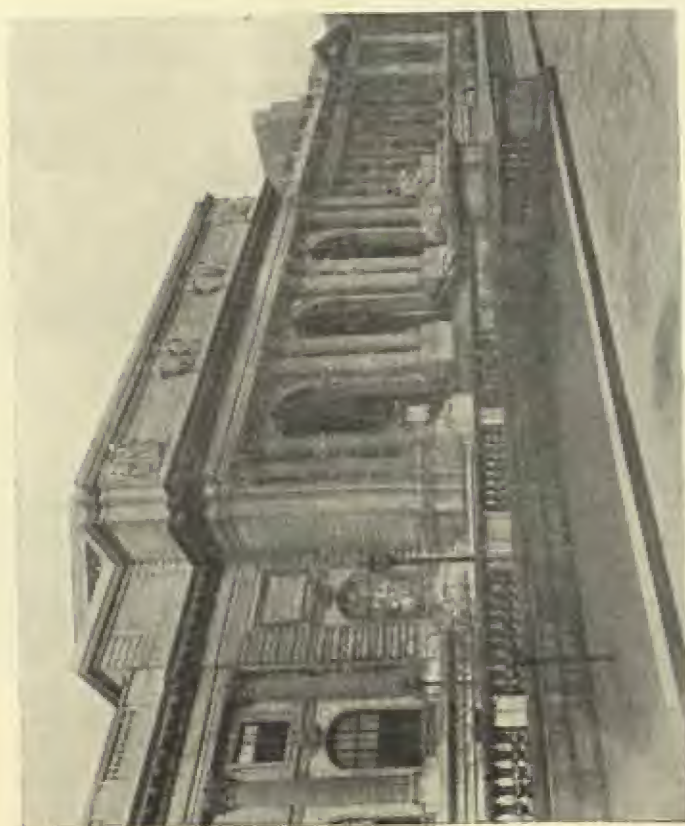
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MEMORIAL AMPHITHEATRE, ARLINGTON CEMETERY, ARLINGTON, VIRGINIA



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conferred upon me. Realising that it was prompted by the action of this time-honoured Institute, I would like to feel that it is in recognition of such services as the profession in our country has rendered in the interest of contemporaneous architectural education. In all sincerity, I would rather believe that by example I had in some way influenced others in the right direction than be conscious of individual success or feel that what I have done were worthy of your commendation. As you know, I believe we should return to follow and respect the tradition which obtained before the present modern confusion, that we should be careful of the direction in which we work, and thoughtful of our influence upon future generations.

While the question of modernity is most important, it is after all the true inborn sense of beauty which assures the architect his success. Goethe said: "The Beautiful is a manifestation of secret laws of nature, which, but for this appearance, had been for ever concealed from us." The layman too frequently only superficially understands beauty in defining its attributes, as though it were a mere appeal to the emotions, a pleasure-giving luxury, or a refining influence. It is rather an organic vital provision of nature, manifestly a part of the order of the universe—divinely ordained for the specific purpose of promoting *permanency* in all things, and giving life and enthusiasm wherever it may find its resting-place. It is, indeed, a force in life capable of stimulating the noblest endeavour, and capable of making virtue appeal to the senses and making truth endure. Nowhere is this so vividly illustrated as when we consider architectural design. The practising architect, if he continues, as he should, to be a draughtsman all his life, must realise that beauty of design and line build well in construction, and with greater economy and endurance than construction, which is mere engineering. All form and all design are the natural and legitimate outcome of the nature or purpose of the object to be made. The practical and the artistic are inseparable. There is beauty in nature because all nature is a practical problem well solved. The truly educated architect will never sacrifice the practical side of his problem. Some of the greatest economic as well as architectural calamities have been executed by so-called practical men with an experience mostly bad, and with no education.

The science of modern engineering has too frequently divorced the architect from many of the

larger and more interesting so-called utilitarian problems of construction. Some of them are entirely and legitimately architectural problems, while in other cases the architect should collaborate with the engineer. There may be no question of decoration or ornament involved, but architecture and practically all construction should be inseparable. An earnest appeal should be made for this collaboration, not merely in the interest of beauty, but rather in the interest of economy—beauty will follow in its natural sequence. In the larger municipal and suburban problems requiring economy in cost and saving of energy, even when commercial and investment interests are involved, in problems of traffic, rapid transit, and public comfort, under all conditions in the solution of these greater problems the qualitative and quantitative viewpoints should be inseparable. Following the natural laws of the survival of the fittest, if undertaken with art, beauty will predominate in the end, and so deliver us from the defacement of nature, and make the city and suburbs more fit to live in, especially where the working and poorer classes are concerned. Such problems may only involve a thorough knowledge of good planning.

In the first years of my architectural career I was accused by my fellow countrymen of attaching too much importance to the artistic study of the floor plan; it was constantly asserted that I was trying to inculcate the Paris Beaux Arts methods of education into our American architectural practice, my critics not realising that those methods of study in plan have been adhered to at all times since the beginning of architecture. They little realise that if the floor plan, determining two of the three dimensions in space, is well studied, beautiful in proportions, with a proper distribution of piers, thickness of walls, logically disposed and with good circulation, there will be no structural difficulties, and that this principle has obtained ever since the dawn of architectural history. The plan lends itself to thinking in three dimensions. When the plan looks well it builds well, constructs well, so that we find we need very little of the analytical mathematics to assist us excepting as a mere matter of verification. Until modern times, architects knew but little about analytical mathematics as compared with what we are now given to learn—but they knew their stereotomy better than most of us to-day. They knew but little about the strength of materials, but they understood constructive

principles, for, after all, analytical mathematics is a comparatively modern science. While there existed graphical rules for the approximate determination of the thrusts from arches as early as the thirteenth century, yet it is practically only within the last century that the correct principles of constructive analysis have been fully developed. If an arch or a bridge looks well, it will build well, when it is the outcome of a well-studied plan. There must have occurred many serious calamities in the past because of bad art and no analytical means of verification; but just as nature is beautiful when fit to survive, so the great buildings and monuments of the past that have survived are beautiful in plan, form, and proportion. It is really architecture and well-proportioned masonry *versus* engineering and iron, a comparatively new profession and a new material; each has its use, but they are not interchangeable. I believe that buildings have stood for centuries solely because their plans, as seen on paper, were so thoroughly artistic and beautiful. We are told that the cell of the bee is built at that

angle which gives the most strength with the least wax, so that the line of beauty is the result of perfect economy. Emerson realised the truth when he said it is a rule of largest application, true in a plant, true in a loaf of bread, that in the construction of any fabric or organism any real increase of fitness to its end is an increase of beauty.

We Americans too little realise that we really come to Europe in a large measure because of what man has done with art to beautify nature. As music is more beautiful than any merely natural sound, so nature is generally either greatly enhanced by the human interest when man has made his impress upon it, or it is cruelly and unnecessarily sacrificed.

Art and a proper artistic sense of the fitness of things completes the picture. When far away from civilisation, surrounded by primeval nature, a man, if in his normal state of mind, soon longs for the warmth and colour of fertile fields, the thrift of farms; he thinks of forests interwoven by winding roads or vistas intelligently conceived. The



CIRCULAR STAIRWAY, NEW THEATRE, NEW YORK



HOUSE OF MR. THOMAS HASTINGS, WESTBURY, LONG ISLAND, NEW YORK

pageantry of sea and sky, the starlit night, the rising or setting sun, the rugged mountains or deep crevices, the bewildering beauty of the flowers, can never awaken the same human emotions and sympathy as when with art they are made more beautiful—wedded to weather-beaten walls, the castle or the shrine, or the distant romantic village nestled in the crevice or perched on the mountain-side. I have said that I believe it to be a law of the universe that the forms of life that are fittest to survive—indeed, the very universe itself—are beautiful in form and colour, and that nature's selections are beautifully expressed. Ugliness, deformity, and self-indulgence are synonymous. And so it is in every economy of life—what would

survive must be beautifully expressed. It is equally true that one trained in the understanding of beauty can more profoundly fathom the laws of nature than one who has neglected to develop this side of his education. Indeed, if the way of the artists is undertaken with philosophy and humility, the things that are divine, God in the universe, will, I believe, be more clearly revealed to him, more impressively, more convincingly, than when approached by way of theological discussion or scientific research. And so in literature as in art, the subject matter must be expressed or presented with beauty in order to survive and firmly impress itself upon successive generations. It is the art in story-telling which gives real life and human

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interest to the characters, and which makes the fancy and imagination of the author outlive his own generation. Words may have colour as full and luminous as may be found in any school of painting, and form as subtle and radiant as may be revealed in the art of the sculptor or the architect, and music as beautiful and melodious as a song. Truth or precept as well as fiction will only penetrate the human heart and demand respect and obedience when clothed in beauty. The proverbs, the by-words of the ages, are only familiar truths beautifully expressed with forceful simplicity and precise epigram; even mathematics have a beauty of their own, and, while in some ways allied with beauty in art, both are different phases of what we might call generalised beauty. Every mathematical equation has a certain quality of beauty because it is orderly and complete in its visible expression of a truth. All the natural lines of stresses and strains in a solid are things of beauty, and every structure built to

these true lines, *ipso facto*, is beautiful. Newton's laws of motion, so simple, so fundamental, so inclusive in their scope, could only be enunciated with such elegance of expression to make endure for ever. The divine word of God as it has been revealed in any enduring philosophy or religion has always been enshrined in language immortal.

There is beauty everywhere, and there is no such thing as poverty if only we realise the universal ownership of beauty in nature and art. You may own the land, but not the landscape. You may have physical possession of a great picture or a building, but if they are really great the man who truly owns them is the man who most appreciates their beauty. In the light of this truth in written word, in painted canvas or chiselled stone, or in the harmonies and melodies of sound and in the beauty of nature all round, the happiest and richest man in the world is he who sees most and best understands nature's laws as expressed in beauty.

Mr. Hastings was born in New York City, of American parents, in the year 1860. His grandfather, Thomas Hastings, was distinguished as a composer of sacred music. His father, the Reverend Thomas S. Hastings, an eminent Presbyterian divine, was for many years President of the Union Theological Seminary of New York City; his mother was a Miss de Groot, an American of Dutch and French parentage.

Mr. Hastings obtained his professional education at the Ecole des Beaux Arts, where he took the full course in the Department of Architecture, under the professorship of Jules André. He began his architectural career in the office of McKim, Mead and White.

Mr. Hastings is an Academician of the National Academy of Design, a member of the Academy of Arts and Letters, the Royal Vienna Association of Architects, and the Committee of Visitors to Columbia University (Architectural Department). He is Chevalier of the Legion of Honour; a Director of the American Institute of Architects; Chairman, Sardis Exploration Society Commission; President, Beaux Arts Institute of Design (Graduate of the Ecole des Beaux Arts). He was one of the founders of the Federal Art Commission, and is Chairman, Lincoln Highway Commission, and Director in the Museum of French Art. He was one of the founders of the Architectural League, of which he has been President and several times Director.

LIST OF MR. HASTINGS'S PRINCIPAL WORKS.

New York Public Library, New York City; Carnegie Libraries, New York City; Layout of Baltimore, Maryland (Mt. Vernon Square and Civic Centre); United States Capitol Extension, Washington, D.C.; Senate Office Building, Washington, D.C.; House of Representatives

Office Building, Washington, D.C.; The Plaza at 59th Street and 5th Avenue, New York City; Century Theatre, New York City; Globe Theatre, New York City; Interior of the Metropolitan Opera House, New York City; Academic Halls for Cornell University, Ithaca, N.Y.; Portland (Maine) City Hall; Richmond County Borough Hall, Staten Island, N.Y.; Richmond County Court House, Staten Island, N.Y.; Staten Island Terminal, New York; Manhattan Bridge over East River, New York; Administration Building, Carnegie Institute, Washington, D.C.; City Plan of Hartford, Conn.; Union Pacific Railroad Stations, North Platte, Nebraska, and Grand Island; United States Rubber Building, New York City; Cunard Steamship Company (Consulting Architect for New York Offices); Standard Oil Company of New York, New York principal office building; Bank of Mexico, City of Mexico; one of six architects in collaboration on Panama-Pacific International Exposition, San Francisco, California; Industrial Town plan for United States Steel Corporation, Duluth, Minn.; Ponce de Leon Hotel, St. Augustine, Fla.; Knoedler Building, Fifth Avenue, New York City; National Amphitheatre, Arlington Cemetery, Washington, D.C.; Bryant Memorial, New York City; Yale Memorial Buildings, New Haven, Conn.; Princeton Battle Monument, Princeton, N.J.; City Hall Fountain Memorial, New York City; McKinley Monument, Buffalo, N.Y.; John Paul Jones Monument, Washington, D.C.; Lafayette Monument, Paris, France; Altar of Liberty and Victory Arch for the Mayor's Committee for Homecoming Troops, New York City; War Memorial for Atlantic City, New Jersey; Cenotaph for Unknown Dead, Washington, D.C. (in course of construction); numerous important residences, various churches in different parts of the country, and a number of office buildings for private corporations.

THE CARDIFF CONFERENCE

Unification and Registration

By MAJOR HARRY BARNES, M.P. [F.]

[Read before the Conference on Thursday, 8 June 1922]

MY paper is a link in a sequence of events which may be taken to have begun at a special general meeting of the Royal Institute of British Architects on the 22nd of March 1920. I was a member of a large representative committee then set up, and I think it was on my motion that the terms of reference of the Committee were finally settled. But such has been my impartiality on the question that I think I have never attended a meeting of the Committee. I approach the question, therefore, with what is commonly called a virgin mind. From one aspect I may be considered as one of the rank and file who have to consider this matter, rather than as a member of the Committee. Let us look first of all at the history of the movement. The matter was begun at a special general meeting of the Royal Institute of British Architects on Monday, the 22nd of March 1920. I believe it was begun on the initiation of the then President, Mr. John W. Simpson, and in passing I should like to express my opinion that the time is coming, if it is not already here, when Mr. Simpson will be regarded not only as a great architect, but as a great architectural statesman. At that meeting, in March 1920, proposals for the setting up of a large and representative Committee to prepare a scheme of unification were submitted to the general body, and the Council's proposals were passed. I have the terms of the resolutions,* but sufficient to say here that the proposals were passed and a representative Committee set up. That Committee consisted of 66 persons. I have recently seen some proposals for the Government of greater London which limited the body to be entrusted with that task to 50. The Committee set up by the Council consisted of the President of the Royal Insti-

tute of British Architects, two past Presidents, eight Fellows, seven Associates and seven Licentiates of the Royal Institute of British Architects, twenty members of Allied Societies in the United Kingdom, four representatives of Allied Societies in the Dominions, two representatives of the Architectural Association, seven representatives of the Society of Architects, two representatives of the Architects' and Surveyors' Assistants' Professional Union, two representatives of the Official Architects' Association, one representative of the Ulster Society of Architects, and three representatives of Architects unattached to any professional organisations, making a total representation of 66, properly described as the most representative body of architects of the Empire that had ever come together. Since March 1920 this matter has been under discussion, and here we are in June 1922, so nobody can say that the Committee have hurried through their task, because even now they have not passed outside the stage of principle into the realm of detail. They have ambled along with all the deliberation which one might expect from so august a body dealing with so important a subject. The history, so far as we have gone, is that a really first-class Committee was appointed, and has taken a proper amount of time to come to its conclusions. At a meeting in July 1920, which was the first meeting following the approval of the General Body, the terms of reference were the subject of discussion, and it was finally settled that the Committee should be instructed to draft and submit alternate proposals for unification based respectively on absorption and federation. That was the problem that faced this Committee at the outset. If we are going to get unification, how are we going to get it? Are we going to get it by absorbing all the different groups into one group in which they will lose their own particular identity and take on that of the largest group? Or are we going to have a federation in which the groups will retain their identity and organisation and be united by a more or less loose tie? That was the question put to the Committee at the outset in July 1920. On the 12th of March 1921, at a meeting of the full Committee, it was decided that the basis of unification should be the bringing of all the architects of the United Kingdom into the Royal Institute of British Architects. That was the decision come to after nearly a year's consideration by the full Committee: the decision for absorption or amalgamation, whichever term you like to use, as against federation. It is important to remember that decision because when we come to consider, as I suppose we should consider this morning, what I call the majority and minority memoranda,

* The Resolutions are as follows:—

RESOLVED, unanimously, that this General Meeting of the Royal Institute of British Architects approves of the Council's proposals to prepare and present for the consideration of the profession a more extended and comprehensive scheme for the unification and registration of the profession than that covered by the Resolutions of 1914.

RESOLVED, unanimously, that this General Meeting of the Royal Institute of British Architects approves of the Council's proposal to appoint a Committee representative of the whole profession to prepare such a scheme as is indicated in the Report of the Charter Committee dated 20th February 1920—the Committee to be composed of (a) representatives of the Royal Institute of British Architects, (b) representatives of the Allied Societies, (c) representatives of the Architectural Association, (d) representatives of the Society of Architects, (e) representatives of the Official Architects' Association, (f) representatives of the Architects' and Surveyors' Assistants' Professional Union, (g) representatives of architects not belonging to any of the above-mentioned professional organisations.

we shall find that the effect of the difference of these two is to bring us back to the original question which the Committee, after nearly a year's consideration, decided in one direction. That was the position in May 1921. The Committee had decided upon amalgamation—upon absorption. What has taken place between May 1921 and the present time? The constitution of the Committee was representative of a number of independent organisations, those representatives had the right to decide matters inside their own organisation, but had no right to prescribe for any other organisation sitting on that body, so that, having decided in May 1921 that amalgamation was the thing, the Committee could go no further, it was bound to refer back to each of the bodies of which it was composed the question how amalgamation could be arrived at. References were therefore made back to the Royal Institute of British Architects, to the Society of Architects, and I have no doubt to all the other Societies. This morning it would be preferable to confine ourselves to what has taken place at the Institute. What has taken place there? Any proposal for amalgamation was of course bound to affect the interests of each Society, and might affect unequally the interests of the different classes inside the Society. Amalgamation may be conceived so far as the Institute is concerned as a different thing for the Fellows as compared with the Associates, and a different thing for the Associates in comparison with the Licentiates, so that when this resolution of the Unification Committee came to the Council of the Royal Institute of British Architects, it was referred, and, I think, very properly, to the different classes in the Institute. It was submitted to a Committee representing the Associates of the Royal Institute and a Committee representing the Licentiates. They were asked to consider the question of amalgamation in the light of its effects on their classes and, so far as I understand, meetings have taken place at which the matter has been discussed, but up to the present no report has been received by the Council of the Institute from either of these Committees. The matter is still under consideration. The position then is that the Committee set up to consider the question of unification initiated by the Institute has come to the conclusion that it will be best arrived at by bringing the architects in the United Kingdom into the Royal Institute of British Architects. That conclusion is under consideration by the Associates and Licentiates, but no decision has been yet reached. I wanted to bring that out clearly because there may be some misapprehension as to the exact position which we have reached at the present time. We have got no farther than the realm of Principle, we have not entered the realm of Detail at all. It is not advisable at the moment to confuse the issue which does really present itself to us now by being under the impression that we have any detailed method of effect-

ing unification. In May of this year, at a meeting of the Committee, which, I understand, was attended by 32 members, and if I had been there would have been composed of just 50 per cent. of the Committee, a statement on unification was submitted to be issued to the members of the Institute. From that statement a certain number of members of the Committee dissented, and the result is that we have two statements before us—a majority statement and a minority statement signed by four members of the Committee. I want to ask you just for a few moments this morning to apply your minds as judiciously as possible to those two statements, and see where they lead us. I think it is important to do that, because this question is in a different position to what it was before March 1920. We can never get back to that. We can never escape the influence of these last two years of discussion and negotiation. The majority statement is to the effect that the interest of the profession will be best served by the grouping of the entire profession into an organic whole under the name of the Royal Institute. I do not want to go into all the details of the resolution, but that is the substance of it. The minority, I gather, would like to know a little more what is meant by the term "grouping into an organic whole." It is not possible until we get further into the matter of detail to make a very clear statement on that point, but I think we may well bear in mind that we are in the age of groupings. If we look at what is going on outside the profession, we see that we are in a period in which the whole tendency is for those who have common interests to get together into a group and to unite themselves as effectively as possible for the purposes they have commonly at heart. One does not need to give any illustrations of that—it is pretty apparent. The Minority Statement, signed by men of high reputation and long standing in the profession, men whose views deserve to be and must be taken into account, puts forward a difference of opinion between these men and those who form the majority. What is the issue between the two bodies? I have read the two statements very carefully, and I have read them first of all to find out what are the points of agreement, because in any negotiations it is much more important to ascertain how far you agree than how far you differ. It may very well be that when you have ascertained the extent of your agreement you may find it possible to extend that agreement to such an extent as to wash out your differences. In what do they agree? They both want unification. The majority say, "unification is desirable"; the minority say, "we are strongly in favour of unification." There is no issue on that point. And they are both in favour of registration. If there is anybody here, or if there is anybody in the profession who does not want registration, then for them there is no interest at all, either in the whole proceedings of the Unification Committee or in the statements issued by

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either the majority or the minority groups. To the man who does not want registration the whole matter is immaterial, and I am not addressing myself to him in the slightest degree. The whole Committee want registration. I am going to assume that those of us who are here want it. It is difficult to understand any body of persons in the profession not wanting it. What does it mean? Registration means a profession. Whatever one may think about it, there is no doubt that there is a difference between our standing and the standing of doctors and lawyers. There is a profession of architecture which cannot be said to exhibit itself to the world in the same light as the profession of medicine and the profession of the law, and there is no doubt that registration is the most potent if not the only thing that can substantially move the profession of architecture up into line with medicine and the law. It is not surprising, therefore, that the profession as a whole is in favour of it; that the Unification Committee want it; that the majority and minority both agree on that point. Let us keep that steadily before us in considering these two statements. Registration is the thing agreed on. What, then, is the difference between the majority and minority on the Committee? It is this. The majority and the minority both want to get to the same goal, but the majority say, "Let's get to registration by way of unification"; while the minority say, "We will get unification by way of registration." The majority say, "Unify first, and you will then get registration"; and the minority say, "Register first, and then you will unify." That is the issue. Those of us who want to come to a conclusion on that question have got to decide whether we are agreed on the goal, and then to decide which is the best path by which we can reach that goal. Are the majority right in saying that we will get registration by way of preliminary unification, or are the minority right in saying that we can go on to registration without any such preliminary steps, and that having got registration then unification will follow. There is nothing very abstruse about the thing at all. We want registration. What is registration? Registration is the entering upon a register of men who have fulfilled certain conditions. That involves two things. It involves stating the conditions, and it involves setting up an authority which will decide whether the conditions have been fulfilled or not. Those are the two essential things for registration. You must agree on the conditions under which men shall go on the register, and you must set up an authority which will say whether those conditions have been fulfilled or not. If this was a matter which could be dealt with inside the profession, that would be one thing, but it is not. You cannot settle the question of registration inside the profession. You must go outside. The question of registration is not going to be settled by men who are in the profession, but by men who are in a much

humbler place—in Parliament. You have to go to the House of Commons, and afterwards to the House of Lords, and you have to get a body of men who are not engaged in the profession, who, so far as I am able to judge, are not particularly interested in the profession, to lay down these conditions and set up this authority. The House of Commons lives by taking decisions, but it hates to do so all the time. Every time a Member of the House hears the Division bell he shudders, because he knows that for all these things he may be brought to judgment, and may have to give an answer as to why he voted this way or voted that way. All Members of the House of Commons love to be led, and in the main questions upon which they have to vote they are led. But there crop up from time to time questions which are not so simply settled. They have not been raised to the dignity of great political issues, and I must confess, important as I think our profession is, I cannot see any prospects of the question of what men shall be in the architectural profession ever becoming a great political issue in this country, therefore, Members of the House of Commons are never likely to get the clear lead from their Leaders and Whips that they get on other questions. This belongs to a class of questions which is not determined in that way. The House of Commons, if it cannot get a lead from inside, likes to get a lead from outside. It does not like to have a thing thrown before it and told, "You must make up your mind on that without any lead at all." What the House of Commons likes to be told is, "This is an agreed Bill." That means that those who are interested in the Bill have come together and have agreed that it is the best measure that can be brought forward. The House of Commons has then only to consider the interests of the public. When a measure comes before the House in that form it is likely to get through, but when it appears in any form in which the House of Commons has to decide between a number of varying claims by people immediately concerned in the measure, it is likely to turn the whole thing down and say, "Make up your minds what you want before you come to us. You mustn't expect us to make up your minds for you." That is a statement of the case which would be generally admitted by anybody who knows the working of Parliament, and, having in mind that point of view, I think we must examine the majority and the minority statements to ascertain which are most likely to bring registration before the House of Commons in a form likely to secure the assent of Parliament. What do the majority propose? They propose to precede their approach to Parliament by first coming to an agreement with the various bodies of architects in the country. They say, "Let us endeavour to get into such a position that when we go before Parliament with the Registration Bill we can say, 'These are the conditions upon which we think a man alone shall be allowed to come

on the register. These are the conditions we want in the Act, and this is the kind of authority we want to set up to see that the conditions are fulfilled. As a profession, we are agreed on the conditions and the authority. What we ask you to do is to give them statutory force.' " That is the position that the majority take up. The minority take a different view. They say, " There is no need to do that." They argue that the arrangement as proposed by the majority raises all kinds of very difficult questions, that on the question of registration there is already agreement with us ; they say that the Society of Architects is committed to it, that it is the basis that has kept it going for the last forty years ; they say that the Official Architects' Association is desirous of working with the Institute in every way, and that the Architectural Association is allied to the Institute and the Official Architects' Association ; that being so, they say, " We are a united profession on this point. The road is quite clear. Let us go ahead, we do not need any closer relationship. The only relationship we want is that of registration. Otherwise we desire to be as we are, and that is all that is required." If I may use an illustration, both the majority and the minority contemplate matrimony in the sense of registration. The majority say, " Let us be engaged first, and then we will proceed to the altar with the experience of our engagement, and with a real desire to live happily together afterwards." The minority say, " No ; it is perfectly true that we have an interest which is sufficiently common to induce us to enter into the marriage state, but it is purely a marriage of convenience. Let that be clearly understood. No preliminary engagement at all, and we part at the church door." There are grounds upon which a clergyman may refuse to perform the marriage ceremony. I do not know if they can go quite so far as to consider the general feeling between the parties, but, after all, the House of Commons, which will play the part of clergyman, is likely to be influenced by the relationship between the parties. Let us take the best view, and that is that you can get agreement on the matter, though I confess that I think agreement on the conditions and authority that is to be set up will not be reached very easily. Whether that be so or not, I put this question to the minority. Is it likely that under the relationship which they desire to maintain, the conditions under which men would be put upon the register would be the conditions on which the Institute, acting by itself, and, if it were the sole body, would lay down ? Are they not in the nature of things bound to be something less ? Here you have different bodies who at the present time lay down their own conditions for entrance into their own bodies, they have to come together and agree on a common set of conditions. Is any party likely to get its own way ? Is not the result likely to be a kind of compromise in which the conditions will be something

less than the conditions which would be laid down if the Institute was dealing solely with the matter ? If that is true about the conditions, is it not also true about the authority ? If there is to be any grouping, and if the various architectural bodies are to remain independent, is it believable that they would consent to the authority which would determine entrance to the register being one of the Societies ? Is it likely that under any form of agreement that the Society of Architects would consent to the Royal Institute being the sole body to decide who would go on the register or not ? As architects, we are always negotiating with someone, with clients, with contractors, and others, and always in negotiations there has to be some give and take. I submit with confidence that if the minority is right that agreement can be obtained, then the inevitable result must be agreement on conditions which would be something less than the Institute itself would prescribe, and also agreement on some authority which would not be the Institute, but which must be some other authority upon which no doubt the Institute would have a preponderance of representation, but yet would be some authority other than itself. If the minority are right and agreement can be obtained and you can get your Registration Bill, then that Registration Bill will set up some authority which is not the Institute, but is a federated authority. In other words, you will be back in the position in which the Committee found itself before May 1921, when they were considering the question whether they should be one body arrived at by amalgamation or a federated body. It decided that there must be one body, and that body the Institute. The effect of the policy advocated by the minority would be to set up a statutory body governing entrance to the architectural profession which would not be the Institute. Of two bodies, one must always be the lesser. You cannot maintain equality. I venture to predicate that if you get a measure of registration through the Houses of Parliament in which an authority not the Institute is set up and has the power of opening and shutting the doors of the profession, that that authority will in the course of time be the greater power, and the Institute will lose prestige and position. What you have to decide is to whom are the keys of heaven to be given—to the Institute or to some other authority to be set up by Parliament ? That appears to me to be the logical result of following the course laid down by the minority even if that course should be successful. But would it be successful ? Could agreement be arrived at ? I venture to doubt it. What we should find would be that architects would come before the House of Commons on the Registration Bill in the same position as the nurses two years ago. The nurses were not agreed, and it led to a fierce conflict in the House of Commons between the two bodies which represented the nurses. Let me read what the Minister of Health

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said when the Bill was turned down: "The Government arranged for meetings with the various parties who are interested in this Bill and have had conferences with them with the view of discovering whether a sufficient measure of agreement could be reached by which we could obtain a Bill. I am sorry to say that the result of these conferences has convinced me against my will that such an agreement is not obtainable. I think it arises from the fact that those who are interested were not by any means agreed as to what was implied by registration. In some quarters it was thought that the authority responsible for registration should deal with the conditions of training—not only the standard arrived at, but the conditions and conduct of training. Another difficulty is that it appears to be thought by some that the body responsible for the register should control the conditions of employment. I found that the differences on these and kindred subjects were so great that it was quite out of the question to bring about an agreement. The controversy appears to have been unfortunately mixed up with personal and sectional issues which cannot be reconciled."

Just as the Bill promoted by different bodies of nurses who had not come to an agreement failed to pass the House of Commons, so a Bill promoted by different bodies of architects not in agreement would fail to pass the House. So that if you do agree you get something less than the Institute, and if you do not agree, you get nothing at all. The minority point out the position in which the Institute stands at the present moment—its influence, its prestige, and the fact that it has been built up really on a basis of excluding from the Institute men who were not prepared to undergo the examination and obtain the qualifications demanded by the Institute, and they draw attention to the fact that a great number of men have spent time and money to pass these examinations to secure the qualifications, and that the effect of the majority proposals would be to deprive these men of the advantage which the possession of these qualifications gives them. That is a strong point. I am not a London architect, I am a provincial man, and I know what it means to provincial men to secure these qualifications and the advantage it gives them in their work. But, coming back to registration, the minority itself says that in the course of time this difference would disappear. If the present basis of the Institute was preserved, it would in the course of time bring everybody into the Institute, which would wipe out the whole of the advantages, but you have further to consider that registration itself must to some extent obliterate that difference because there is not the faintest shadow of hope that under registration you can differentiate between the men who have the qualifications and those who have not. We have seen the nurses and the dentists come for registration. When the dentists came they endeavoured to differentiate on the register between men properly qualified and the

men who had no such qualifications. They said, "Give us a differential register. We want all inside, but not on the same terms." Their argument might almost be used in the same words for the architects' profession.

The object of the Bill is to establish the dental profession on a sound and permanent footing. For that purpose it is proposed to bring in a large number of persons who in the eyes of the law have not been qualified to practice dentistry hitherto. It is a very large and generous action on the part of those who have already qualified to agree to this extension. They have given hostages to fortune, and have undergone long years in training to follow out the course established under the law, and to get put on the qualified register of the Act of 1878. These men have spent time and money to do that which the State considered the minimum necessary. They admit now, in the National public interest, that the great thing is to secure control and check over those who are not so qualified. They object, however, to the idea that men who have gone through the training in the theory and practice of dentistry should be put on the register on equal terms with those who are not so qualified, so that in the eyes of most men and women there would be no difference between them. The proposal is that those who do not take the examination are to be shown on the special list. We want to be shown readily and clearly those who are and those who are not properly qualified.

The Minister of Health refused to accept the proposal in these words:—

The Government cannot accept the amendment. I have some sympathy with the point of view put forward that dentists who have pursued long and careful scientific study and who have thoroughly qualified themselves in every direction for their profession may feel that the admission of a large number of men to the same register who have not undergone the same training as they have is a form of dilution. But the whole scheme and purpose of this Bill is this: At the present time anybody can set himself up as a practising dentist without any qualifications, restraint or discipline. The dental profession—i.e., the people who are on the register of 1878—are the people who have complained of this state of things. They are the people who want this state of things to come to an end. They are the people who have asked that the unregistered dentist should be brought under professional discipline. As this amendment stands, you are not going to put these people on the register. You are going to say: "We are now going to have a separate list of sheep and goats." I don't know whether the unregistered dentist would not be in a better position in the present condition of things, because nowadays there is no such list of sheep and goats, although there may be a list of sheep. You cannot have it both ways. It will be a great future advantage to get an entirely unregulated dental practice prohibited; and if, at the eleventh hour, when we have got most of the various interests into line, we should break up again and throw the whole thing back into the melting pot, it would be a great pity.

It is clear then if you are going to have registration, Parliament will not agree to a special list of men who

have the Institute qualifications, and therefore I say to those who say that the proposal of the majority would tend to obliterate the qualifications that registration would do the same thing. There are difficulties both ways, but to my own view, and, I think, the view probably of the bulk of the profession, the course which the majority propose to take is the wiser course. They propose to break the back of their difficulties outside the House,

and not to attempt to do it inside the House. If you cannot get unification outside the House, you cannot get unification after going there. You must take the risk. That there is a risk the minority point out. It is the risk of diminishing the prestige and position of the Institute, but the risk which will be run by the minority is a greater one, that of bringing into existence an authority which in time would be superior to the Institute.

The Conference Banquet

The Conference Banquet took place on Friday evening, 9 June, at the Park Hotel, and was presided over by the President, Mr. Paul Waterhouse, M.A. Among the special guests were the Lord Mayor and the Lady Mayoress of Cardiff, Major Harry Barnes, M.P., Mr. J. C. Gould, M.P., the Mayor of Newport, Mr. D. E. Roberts (President of the South Wales Institute of Engineers), Dr. and Mrs. W. Evans Hoyle, Mr. Wm. Gibson (President, Cardiff Master Builders' Association), Mr. Fred Lewis (President, S.W.B.T. Employers' Federation), and Dr. W. Evans Hoyle (Director of the National Museum of Wales).

The PRESIDENT, in proposing the loyal toasts, referred especially to the Prince of Wales, whose health he proposed, not only because he was Prince of the Principality of Wales or Heir Apparent to the Throne, but also because he was an Honorary Fellow of the Royal Institute of British Architects.

The LORD MAYOR OF CARDIFF (Mr. F. Harold Turnbull, J.P.), in proposing the toast of the Royal Institute of British Architects and the South Wales Institute of Architects, said: May I be allowed, Mr. President, to say that it has been a great pleasure to me that during my year of office I have had the honour of receiving the representatives of the Royal Institute of British Architects. I most heartily welcome you to Cardiff on behalf of the citizens of Cardiff. It is an honour to have your Conference in our city, and it will be a great success in every respect. We hope that you will carry away from Cardiff very happy memories of your visit. I understand, Mr. President, that last year was the first occasion on which the Conference of the Royal Institute of British Architects was held in the provinces. I felt that the first time the Royal Institute came into the provinces they should have chosen Cardiff. British architects have something to thank Cardiff for. I think you ought to have a feeling of gratitude akin to that which we, as citizens of Cardiff, feel towards the City Councillors of Cardiff of 20 years ago who decided to purchase Cathays Park. In my estimation that was a policy of courage to decide to spend half a million, for 20 years ago was something quite different to to-day. To have spent that and to have reserved the land for the lay-out of public buildings is something for which we should all feel gratitude. Cardiff has given your profession an opportunity of showing what the ideal of public buildings should be. There is another reason why Cardiff should be encouraged by the Royal Institute of British Architects, and that is because we are doing what we can to encourage your profession. You probably know that we have established a Department of

Architecture and Civic Design at our Technical College. While I am on that subject might I be allowed to thank the Secretary of the South Wales Institute of Architects for the real assistance that body has given us in setting up that Department? Not only have they shown great willingness, but they have given great practical assistance. As a layman, I feel that there are two sides to your profession. There is the artistic side, and there is also the scientific side. I believe that in our municipal buildings of Cardiff we have almost perfect examples of both sides of the architects' profession, as I understand it. We have, first of all, buildings which are not only beautiful in themselves, but wholly admirably serve the purpose for which they were designed. I should say that no little of the success which we have achieved in the administration of Cardiff is due to its beautiful surroundings. I can assure you that the people of Cardiff are very grateful for what architects have done for them. I trust that the success of the Royal Institute will be continued. I believe that the profession of architecture is a really noble profession. I believe that the work you do promotes the health and happiness of the people, and nothing could be more noble than that.

The PRESIDENT: We members of the Institute have to thank you, my Lord Mayor, for the very charming way in which you have proposed the toast of the Royal Institute. Yours are the kind of expressions towards the architect that we delight to hear. I want to say that your reception of the members of the Conference last night, at which, unfortunately, I was prevented from being present owing to an accident which might happen to anyone—a client—was appreciated by all our members.

Why are we here to-night? Why a Conference? And why at Cardiff? The answer is in the toast to which I am responding. The answer is the Royal Institute of British Architects and the South Wales Institute of Architects. We desire to meet together and to foster fellowship amongst fellow craftsmen. Cardiff represents these objects for which the Royal Institute of British Architects stands. What are those objects? First the elevation of architecture. Cardiff as a city has done its share in the elevation of the art of the architect. We of London who help to manage the Royal Institute look upon Cardiff as a pioneer city in the promotion of modern architecture in an exceptionally beautiful lay-out. Another object is the protection of the architect. Many people think that the protection of the interests of the architect from a monetary point of view is our sole object, but we protect the architect in many ways besides the protection of the pocket. There is the educational side, the promotion of a successful

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future for architecture. Starting in this sphere much later than some rivals, Cardiff has none the less made great progress, and we can congratulate her on the capture of Mr. Purchon. We hope also that the Institute helps in the promotion and protection of the honour of architects as professional men. Then there is the question of brotherhood. Those of us who live in London regard the co-operation of others living in other cities as valuable. Long ago we lost the idea that London is the only centre. The Royal Institute's activities are spread not only over the whole of the British Isles, but also over the whole of the British world, and every spot within it is a centre from which an effort is made to maintain the brotherhood and prestige of the profession. Lastly, there is an enlargement of life which we all hope to promote, and without which I do not see how architecture can succeed. What is an architect? He is a man who with a few loads of bricks is expected to make a house. A great painter was once asked what he mixed his colours with, and he replied "brains." If an architect is asked what he lays his bricks with, he will reply "hope." I wish all success to the Conference. I wish to say how much I missed Major Barnes' paper this morning. It is a subject we all have very much at heart, and the enlightenment he gave must have been of great help. It is a subject which has been tinged not with antagonism but with difference of opinion. I do not say that anyone has malicious motives behind those differences of opinion. As a very old member of the Royal Institute I have welcomed differences of opinion as showing that there is life and energy in it still. The differences of opinion are not going to kill the Royal Institute, they are going to give it more life. I have very nearly got to the end of my first year of office, and I am going to plunge into my second year full of hope for the future. Friendship and enthusiasm are the great things. They are infectious. If you will make it your business to infect your friends with enthusiasm and your enthusiasm with friendships I am sure we shall go far.

Mr. PERCY THOMAS, O.B.E. [A.] (President South Wales Institute of Architects): I am very glad of the opportunity of thanking you, my Lord Mayor, on behalf of the South Wales Institute of Architects, for the help you have given in making this Conference a success. I am sure the whole company will endorse what Mr. Waterhouse has said regarding the most excellent entertainment and gracious welcome you gave us last evening. I should like, Mr. President, to thank you also for the honour you have done us in selecting Cardiff for the Conference this year. The far-reaching effects of your visit will be of inestimable value to the South Wales Institute of Architects. Although we in Cardiff are proud of our city, and expect visitors to praise our civic centre and fine buildings, there is no doubt that public interest in architectural matters is not so keen as might be expected. The number of public men in Cardiff interested in architecture is remarkably small, and if this visit and the publicity given to it stimulate interest in architectural matters then it will have been a success. I cannot help feeling that the profession in South Wales is responsible for this apathy to some extent. The standard in the past has not been very high. It is not many years since the mention of South Wales in architectural circles in London produced pretty much the same effect as the mention of Wigan by a music-hall comedian produces to-day. We feel that things have

altered since then. At any rate we in South Wales have done our part in the propaganda work during recent years. There has been a slow but sure awakening of public interest in public buildings, in town planning and so forth. I should like to give you a few figures. In 1912 the South Wales Institute numbered, members and students, 61 in all. There was an occasional winter lecture, very badly attended, an annual dinner, and, most important of all, an annual picnic! To-day our membership is over 200. We are the fourth largest of the Allied Societies, and that increase has taken place since the war. We have branches in Newport, Swansea, and the Northern Valley. We have public lectures on architectural subjects in Cardiff, Newport and Swansea, and we have this infant school of architecture in Cardiff. That school is in very capable hands, and we have no doubt that the effect will be seen in our cities in the years to come.

Major HARRY BARNES, M.P., proposing the toast of "Our Guests," said: We feel that Cardiff architects are very fortunate in having at the head of the civic body of their city a gentleman such as the Lord Mayor. Some great scheme comes before the civic heads, and sometimes they think that what is wanted is an engineer, and sometimes a surveyor, but we desire to see at the head of every civic body a man who is capable of saying that what is wanted is an architect. I have to ask you to associate with this toast the name of Mr. J. C. Gould, M.P., and Dr. W. Evans Hoyle, M.A., Director of the National Museum of Wales. You are fortunate in Cardiff in possessing in Mr. Gould a man who commands not only the respect of the House of Commons but also the respect of the country. I am sure that Mr. Gould will appreciate that his name is associated with the toast not only because of his personal qualifications, but because he is the representative of one of the great patron classes of architecture. Great architecture is only possible under two conditions. One is that you shall have a great moving idea, and the second is that you have the control of other people's money. I know only three ways of getting control of other people's money. The first is by way of commotion. That is the way of the conqueror. To that we as architects owe the great range of military buildings, which has put a castle down in the heart of Cardiff and has given to Wales as treasures her great castles of the past. The second is the method of devotion. It is the method of the Churchman, and has given us the great cathedrals. The third is by promotion, and that is the way of commerce. It is to the great merchant princes of the past that architecture owes so much. One cannot think of the great Northern Italian cities, of the cities of the Hanseatic League, and, indeed, of our English cities, without seeing how much we owe to the great merchant princes of the past. Nothing better can be done by our merchant princes than to leave behind them in their cities great memorials of their prosperity. I ask you to couple with this toast the name of Dr. Evans Hoyle, Director of the National Museum of Wales. Cardiff, as our President has told you, is one of the cities in the United Kingdom that has exhibited a great conception of the place of architecture in municipal life; and if I might close these remarks by reading to you a public decree of 1294 from the City Council of Florence I think you will agree with me that the spirit which prompted those great building enterprises which are now the chief

attraction of Northern Italy is to-day alive in the city of Cardiff. In 1294 the city of Florence had put two adjacent cities in their proper place, and this is what the city council of that day said: "As it becomes the sovereign prudence of a people of high origin to proceed to business in such a manner that its wisdom no less than the magnanimity of its conduct is attested by works outwardly achieved, the master architect of our community is ordered to make models and drawings of the utmost prodigality and magnificence for the restoration of S. Reparata that the industry and right of man may never again invent, or ever be able to undertake anything whatsoever more vast or more beautiful." That was the spirit that bought Cathays Park and put up the buildings there. "It is now made law"—and I would have these words printed in every council chamber in the land—"It is now made law that no public works shall be begun unless with the intention of making them correspond with the great soul made up of the souls of all the citizens united in one soul." That was the spirit which made Florence. That is the spirit that is making Cardiff.

Mr. J. C. GOULD, M.P., in responding to the toast, said: Major Barnes, my Lord Mayor and Lady Mayoress, we shall certainly in the future be more careful to make our towns and cities more conducive to comfort and beauty. In that task to-day one of the greatest difficulties we have to contend with is the relationship which exists between workmen and those desirous of extending their

operations. One of my friends, a member of your Institute and a very well-known London architect, is engaged with me in building some large buildings outside this country. We are also building a large building in this country. And we are encountering so many difficulties, brought about by trades-union influences, that we are finding it almost impossible to go on. You may have all the building schemes and all the houses you want, and houses erected at amazing low costs, but I venture to say that the quality of the work going into the houses to-day is such that in 20 to 30 years' time they will fall down. That is false economy. I regret exceedingly that in the hurry-up process of civic building we are putting houses up which are unsafe. The day has gone when a man laid his thousand bricks a day. Restrictions have been superimposed, and men to-day are working against time for money and wages. It is a reactionary movement, and reacts on every class in the community. We have to realise that the great cry for larger houses has gone and that we are back again to thrift and economy. We in this part of the country are faced with such conditions that unless we can economise we shall not know how we are to carry on. What we want is a little more human understanding between the workman and the employer and the civic authorities. If we could only get that we should not find half so many unemployed walking the streets of Cardiff.

Dr. W. EVANS HOYLE also responded to the toast.

A Personal Impression of the Conference

By LT. COL. G. NEWTON, M.A., M.C. [F.].

So many light and airy accounts of the Cardiff Conference have already floated on the breeze that I feel a little self-conscious as I fill my own small balloon with gas. But no doubt the light touch is the right one for these conferences. They should be in the main a social gathering, an opportunity for printed names to become faces and figures, for those to become acquainted whose work lies far apart up and down the country but who pursue, often uphill, the same elusive mistress. And the Conference we have just attended kept its due character of light-heartedness from the first moment when I walked up the marble stairs of the City Hall to the sound of a hurricane of distant laughter (I thought the Lord Mayor was holding a very lively reception, but it was really a Welsh choir giving a laughing chorus), to the last, when I left the grounds of Bute Castle (I wasn't able to stop for the *char-à-banc* tour on Sunday), while peacocks vied in chorus to the sound of instruments of music.

Of course, if conferences are in essence social and personal, it is important that as many should come as can. There is no doubt the attendance should have been larger; and though many cheerful souls from the North and Midlands were there to enliven gatherings by day and prolong until midnight the quiet flow of story and reminiscence, many who had been hoped for were

missed, and the London trains might have been very much fuller. Perhaps they were all saving up for next year.

The general programme was to open the day with a meeting, at which a paper was read (one day a cool and balanced statement of the political problem by Major Barnes, and the next, a thorough examination of the question of civic beauty by Mr. Buckland), and then to wander, a critically appreciative multitude, round the fine buildings grouped to form Cardiff's civic centre of grey stone among the trees of Cathays Park, the City Hall, the Law Courts, the Glamorgan County Hall, the Technical Institute, the great Welsh Museum, the Fire Station, and Bute Castle, with its great circling wall. In the intervals kind hosts swept one away to lunch or tea, and the adventurous penetrated coal-mines or sought the quietness of Llandaff or Bodley's scarlet-ceiled church. The banquet was like many another: we groped through the fumes of the photographer's flash-light to find the wine, which came not, and filled up the intervals of talk scanning the plan of tables to identify many friends we wished to know again; but it was unlike many in the excellence of nearly all the speeches.

So at last we parted, the richer for having met and made new friends. Next year more must come, the hotels must be better, the welcome cannot be more cordial.

Civic Architecture and Art Commissions

By H. T. BUCKLAND, PRESIDENT OF THE BIRMINGHAM A.A.

Read before the Cardiff Conference of Architects on Saturday, 10th June

I HOPE I shall not be regarded as laying claim to any special knowledge upon the subject upon which I am about to speak, or as holding any brief to advocate a policy on the subject. Many, I feel sure, have been devoting far more attention and consideration to the matter than I have done, and could far more worthily present a case. That I should have been invited to address you upon the matter at all is due, I imagine, to the fact that I was impertinent enough to throw out a few suggestions at the Conference at Liverpool last year, which were received with so much gratifying appreciation that it became evident then, and in subsequent correspondence, there was a widespread interest in the subject, which was only awaiting an opportunity for wider discussion; and when I was honoured by an invitation from the organisers of this Conference to initiate such a discussion by giving an address, I willingly accepted, in the hope that I might be able to further a project of which I have always been an ardent advocate.

At the outset, it will, perhaps, be well to define what we mean by the terms "Civic Architecture" and "Art Commissions." The former scarcely needs any definition; one naturally assumes that it means the architecture of our cities which comes under the control of or is erected by civic authorities out of public funds. "Art Commissions" in countries where such exist are committees composed of persons of taste and others in authority, to whom are referred matters of art, architecture and civic adornment, and in most cases civic development.

Among the questions which might be asked are:
(1) "Why does the need for such commissions arise?"
(2) "How are we to know that the working of such commissions would be of benefit to the community?"

A reply to the first could be given by a thoughtful observer in any city in our country, and to the second an enquiry as to the results achieved where such commissions have existed for a number of years would, I think, afford sufficient evidence.

Although our "thoughtful observer" might be able, as a result of his observations, to report that there certainly appeared to be a need for such a commission to guard against the haphazard development which characterises most of our cities, it remains, I think, for us to consider why this state of things exists.

It is a little unfortunate that, in spite of excellent intentions, civic authorities themselves are frequently the greatest hinderers of a proper civic development and adornment. This is due, I think, to several causes, among them probably the first is a mistaken idea with regard to economy, coupled with a praiseworthy desire to exercise the authority which is vested in councillors

by the electors. The second a deep-seated faith in his own convictions, which exists in the mind of the city councillor, and a belief that taste is a matter of opinion. The third a commendable, but frequently exaggerated, idea of his own capabilities and those of the city officials.

I suggest that the ideas with regard to economy are "mistaken," because in the majority of cases the city engineer is made the chief adviser in matters of expenditure upon public works, whatever their character. This function should doubtless appertain to him where the work is such as comes within the bounds of his experience, as, for example, road making, drainage, street improvements, lighting, etc.; but when it becomes a question of civic improvements, it certainly appears to be poor economy to give him jurisdiction over expenditure upon questions of new buildings and the adornment of the city, which he is not qualified by training or experience to deal with, even though by so doing a saving in professional fees is effected.

When advancing this contention one is frequently met by the retort that the city engineer is a qualified architect, sometimes an Associate or Fellow of the Institute. I think the reply to this is that any man whose time is fully engaged upon the routine duties of a city engineer could not possibly devote sufficient time to the development of his artistic faculties to justify a dependence upon his opinion in matters of art.

The praiseworthy desire of a city councillor to exercise the authority vested in him by the electors is a little difficult to combat when making suggestions that advice from others than councillors and officials should be sought, as one is always faced by the argument that the city councillor is responsible to the ratepayer, and that it would not be fair to the electors to let anyone else dictate as to what should be done upon matters in which public expenditure is involved. Behind this argument we find him taking refuge in order to enable himself to exercise that taste which he treasures as a matter of opinion, and conceal his secret satisfaction and faith in his own capabilities and those of the city officials with whom he is in daily touch.

If this is a fair statement of the case, and you are in agreement with me as to the desirability of forming art commissions to exercise some sort of jurisdiction over such matters as I have outlined, it must be apparent at the outset that we shall have to combat very deep-seated convictions founded upon a practice and point of view which it will be very difficult to combat; but of this I propose to speak later.

In America there appears to be a keener public interest in civic development than is evident in England,

and perhaps other countries; and through the good offices of our Secretary, Mr. MacAlister, and the courtesy of various organisations in America, which I most gratefully acknowledge, I have been furnished with a number of very interesting documents, including reports of the working of various art commissions, suggestions as to their organisation and scope, and copies of the laws relating to art commissions in no fewer than twenty of the largest cities in America, from which it is evident that a quarter of a century ago the need or desirability of forming such organisations had for some time been felt, with the result that in 1898 laws were passed in the City of Boston establishing an Art Department, under the charge of five art commissioners, who were appointed as follows:—

One from a list of three persons selected by the trustees of the Museum of Fine Arts; one from a list of three persons selected by the trustees of the Boston Public Library; one from a list of three persons selected by the trustees of the Massachusetts Institute of Technology; one from a list of three persons selected by the Boston Art Club; and one from a list of three persons selected by the Boston Society of Architects.

In these laws it was enacted that:—

No work of art shall become the property of the said city by purchase, gift or otherwise unless such work of art, or the design for the same, together with a statement of the proposed location of the same shall first have been submitted to and approved by said board acting by a majority of all its members; nor shall any work of art, until so approved, be erected or placed in, over or upon, or allowed to extend in, over or upon any street, avenue, square, place, common, park, municipal building or other public place under the control of said city or any department or officer thereof. No existing work of art in the possession of said city shall be removed, re-located or altered in any way that may be ordered except by a vote passed and approved, in writing, by all the members of said commission, and also approved by the mayor.

When so requested by the mayor or the city council, said commission may, in its discretion, act in a similar capacity with similar powers, in respect to the design of any municipal building, bridge, approach, lamp, ornamental gate or fence, or other structure erected, or to be erected, upon land belonging to the city, and in respect to any arch, bridge, structure or approach which is the property of any corporation or individual, and extends in, over or upon any street, avenue, highway, park or public place; but this section shall not apply to structures authorised to be erected under the provisions of chapter five hundred of the Acts of the year eighteen hundred and ninety-seven, and shall not be construed as intended to impair the power of the board of park commissioners of said city to refuse its consent to the erection or acceptance of any public monument or memorial, or other work of art of any sort, within any park or public place in said city under the jurisdiction of said board.

In 1899 there was created, in Chicago, a commission known as the Art Commission of the City of Chicago,

the said commission to proceed and act in accordance with the provisions of an Act of the legislature entitled, "an Act to provide for the creation of art commissions in cities and to define their powers." This was approved on 24th April 1899; but even earlier than these was the appointment of a "Commission of Sculpture" for Connecticut State Capitol, the laws of which are dated 1887.

The laws governing the formation of art commissions in the twenty cities already referred to are very similar in general scope, and only vary in matters of detail. The best summary of the considered views upon the subject is contained in a report of a committee appointed at a conference of members of art commissions which was held in New York in May 1913, upon the invitation of the Art Commission of the City of New York, which was attended by members of nine city, two state, one national art commission and delegates from seven cities. At this conference the proper functions and powers of art commissions were discussed, and the formation of further commissions in the future considered. The desirability of the establishment of commissions in both cities and states was strongly emphasised, and certain general conclusions were reached as to the proper form of organisation and the functions of such commissions. A general agreement was arrived at upon the following points:—

1. The desirability of including the mayor, or, in case of a state commission, the governor, as a member of the board;
2. The desirability of including in the commission both professional men—architects (landscape architects), painters, and sculptors, and laymen;
3. The desirability of limiting the commission to a comparatively small number—say five to nine members;
4. The importance of conferring upon city commissions the veto power, though it was felt that in the case of state commissions the power should be advisory only;
5. The necessity of adapting the form of organisation to the local conditions existing in each case, and the importance of subordinating matters of form and detail to the accomplishment of the main purpose of effecting the establishment of a commission, where none exists, however limited its powers.

At the conclusion of the conference the committee already referred to were appointed to draft forms of statutes providing for establishing city and state art commissions and defining their powers, as suggestions, and as a possible means of furthering the organisation of such bodies, and the following drafts were ultimately submitted:—

FORM A.—An Act to establish an art commission in a city of the first class.

FORM B.—An Act to establish an art commission in a city of the second class.

FORM C.—An Act to establish a state art commission.

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As the considered opinion of a number of men, architects, artists and laymen experienced in the working of art commissions, the three forms referred to must be regarded as of great weight.

I will read Form A, which is described as an Act to establish an art commission in the city of — :—

Section 1.—There shall be an Art Commission in and for the city of —, composed of the mayor, *ex-officio*, and six others appointed by him within thirty days after this Act takes effect, of whom three shall be persons engaged in the practice of the fine arts (one of whom shall be a painter, one a sculptor and one an architect). Three of such members shall be (or may be) appointed from a list or lists of painters, sculptors and architects, nominated by the governing board of the Chapter of the American Institute of Architects existing in said city (or other organisation representing the fine arts); one of such members shall be (or may be) appointed by the mayor from a list of three persons nominated by the governing body of the Chamber of Commerce in said city, one from a list of three persons nominated by the governing board of the Public Library of said city, and one from a list of three persons nominated by the governing board of (insert the name of a college or university situated in the city); and whenever the term of a member of said commission so appointed expires, or a vacancy occurs, the mayor shall (or may) appoint his successor from a list of persons nominated by the body making the original nomination. The members of the commission who shall be appointed by the mayor in the first instance shall choose by lot terms of office for one, two and three years, and their successors shall be appointed for terms of three years, except appointments to fill vacancies, which shall be for the unexpired term. In case any of the organisations entitled to make nominations as hereinbefore provided shall fail to make such nominations within sixty days after the expiration of a term or the occurrence of a vacancy, the mayor shall appoint a member to fill the vacancy upon his own nomination. In all matters pertaining to work under the special charge of a department, bureau or commission of the city, the head of such department, bureau or commission shall also act as a member of the Art Commission *ex-officio*, in reference to such work.

Section 2.—The members of the commission shall serve without compensation as such, and from their own members shall elect a president and vice-president, whose terms of office shall be for one year and until their successors are elected and have qualified. The commission shall have power to adopt its own rules of procedure and to prescribe regulations for the submission of all matters within its jurisdiction. Four commissioners shall constitute a quorum.

Section 3.—The commission shall have power to employ a secretary and such clerks, stenographers and other assistants as it may require, and to fix their salaries. All employees of the commission shall be exempt from the provisions of the Civil Service Act. Suitable offices shall be provided for the commission by the Common Council. The expenses of the commission shall be paid by the city, and the amount of the same shall be fixed annually by the Common Council.

Section 4.—Hereafter no work of art shall become the property of said city, by purchase, gift or otherwise, unless such work of art or a design of the same, together with the proposed location of such work of art, shall first have been submitted to and approved by the commission; nor shall any work of art until so approved be contracted for, erected or placed in or upon, or allowed to extend over or upon, any street, avenue, square, park, public building or other property belonging to the city. The commission may, when they deem proper, also require a model of the proposed work of art to be submitted.

Section 5.—The commission shall act in a similar capacity with similar powers (unless its approval shall in any instance be

dispensed with by vote of the Common Council) in respect to the designs of buildings, bridges, approaches, gates, fences, lamps or other structures erected or to be erected upon land belonging to the city and in respect to the lines, grades, plotting and designs of public parks, streets, avenues, ways and grounds and in respect to arches, bridges, structures and approaches which are the property of any corporation or individual, and which shall extend upon any street, avenue, highway, park or property belonging to the city.

Section 6.—No existing work of art owned by the city shall be removed, relocated or altered in any way without the like approval of the commission; but in case the immediate removal or re-location of any existing work of art shall be deemed necessary by the mayor, the commission shall within ten days after notice from him approve or disapprove of said removal or re-location, and in case of their failure to so act within such time after the receipt of such notice, they shall be deemed to have approved the same.

Section 7.—If the commission shall fail to decide on any matter submitted to it, except a submission involving the immediate removal or re-location of a work of art, within sixty days after the submission thereof, they shall be deemed to have approved the same.

Section 8.—The term "work of art" as used in this Act shall apply to and include all paintings, mural decorations, stained glass, statues, bas-reliefs, tablets, sculptures, monuments, fountains, arches or other structures of a permanent character intended for ornament or commemoration.

Section 9.—Any member of the commission who shall be employed by the city to execute a work of art or structure of any kind requiring the approval of the commission, or who shall take part in a competition for such work of art or structure shall be disqualified from voting thereon; and the commission may in its discretion invite an expert adviser to give his opinion as to such work of art or structure.

Section 10.—The commission shall, on or before the first Monday of March in each year, make a written report to the Mayor of its proceedings during the preceding calendar year.

Section 11.—The commission shall be the custodian of all works of art owned by the city, and shall have sole charge of the care and preservation thereof.

Section 12.—This Act shall take effect immediately.

NOTE.—The Chamber of Commerce, Public Library and the other institutions named are only suggested as indicating the character of institutions which may appropriately be entrusted with the right of nomination, subject to such substitutions as local conditions may render desirable.

As an evidence of the appreciation with which the work of these commissions is regarded, I should like to quote from a letter written by President Wilson in March 1921 to Mr. Wm. Mitchell Kendall, the architect, upon his resignation from the National Commission of Fine Arts, after four years' service :—

It certainly is a cause for satisfaction on the part of the Government that a means has been found to secure the advice of men, like yourself, of taste and training in matters of art, so that permanently agreeable qualities may be imparted to those Government works which make an appeal to the public eye.

It is a further satisfaction to know that the Commission of Fine Arts, during the ten years of its existence, has maintained the spirit of continuing service; and that even after the official terms of the members have expired they still meet with the Commission when called upon to discuss matters of high importance.

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The commission referred to was created by an Act of Congress approved 17th May 1910. Its members, appointed by the President for a term of four years, included the following well-known names: Herbert Adams, sculptor; John Russell Pope, architect (vice-chairman); James J. Greenleaf, landscape architect; J. Alden Weir, painter; Charles A. Platt, architect.

The ninth report issued by this commission in June 1921 is a monumental document dealing with the progress made during twenty years.

The best evidence as to whether the formation of art commissions works for good so far as civic art, architecture and development is concerned is to be found in the cities where such commissions exist. I have not been to America, so I cannot judge, from personal experience; but from all one hears from those who have I think it may be safely said that architecture and the allied arts hold there a position in the public mind which is not the case in England. If this is so, how far is it due to the operations of art commissions; and if it can be shown to be due to such operations, is it not time England took steps in the same direction?

I hope there are many present who will support my

view that the time is ripe to take action. If so, it only remains to consider what action we should take. The first idea which occurs to one is to approach city councils and endeavour to enlist their interest and get them to adopt some local legislation to effect the purpose. This has been contemplated in one or two cases, but I think it will be recognised upon careful consideration that the results achieved are likely to depend very largely upon the energy of local advocates, which in some cases will be practically negligible. I therefore venture to suggest that the proper course to pursue is to approach the Government and impress upon it—or shall I say convince it?—of the need for legislation, and ensue it. I therefore propose, with the consent of the chairman, after the discussion which I hope will follow, to move the following resolution:—

“That this meeting requests the Council of the Royal Institute of British Architects to take steps in the proper quarter to represent to the Government the advisability of passing legislation for the creation of art commissions throughout the country, to act in a similar capacity to those already existing in America.”

Discussion

MR. PERCY THOMAS, PRESIDENT OF THE SOUTH WALES INSTITUTE OF ARCHITECTS
IN THE CHAIR.

Major H. C. CORLETTE [F.], in seconding the resolution, said I am quite satisfied in my own mind that the resolution which Mr. Buckland has proposed is one of considerable importance. He has shown us that for quite a number of years past the Americans have been doing very useful work by what he calls Art Commissions. I do not know whether Mr. Buckland is aware that in England we are not quite so behindhand as he might suppose. In Kensington, at any rate, we already have, not what we call an Art Commission, but there is a Civic Art Committee, which has only been in existence for a short time, but which is fully alive to the responsibility which should devolve upon it. We all know, as architects, that taste is not a fixed quantity. I used to enjoy certain things when I was younger, but when I look at them now I wonder how I ever thought they were worth admiring. If that is possible, if we do move from position to position in matters of taste, then surely it is possible to improve the taste of our municipal authorities as well as, perhaps, those in a higher sphere. I suggest to Major Harry Barnes that he would do well to urge in another place the importance of improving public taste. We have not very much time to discuss this question, so I shall do little more than refer to an interesting article which appeared in yesterday's *Morning Post* on the subject of Art in Oxford. The Slade Professor of Fine Art at Oxford suggests that one of the objects in dealing with the question of the Fine Arts should be to broaden the ideas of men of liberal education with regard to the part which art should play in public life. He discusses the position of art in Oxford and sums up by saying that if an increasing number of men who will hold responsible positions in after life leave the University with a broadened

view of art something may have been achieved towards educating the public taste. I have much pleasure in seconding the resolution.

The CHAIRMAN: We have our Vice-President, Professor Adshead, with us, who will, no doubt, contribute something to the discussion, and also Professor Zug, of America, and I am sure we should very much like to hear him on what they are doing in America and also on what he thinks we are doing in England. I am not going to take part in the discussion myself, although there are many points which go to prove that an advisory committee of this sort is most necessary and particularly in Cardiff.

Professor S. D. ADSHEAD [F.]: We have all known Cardiff for many years as the city which presented us with one of the great municipal centres of the country, and I think we are all agreed that the collection of buildings is not disappointing and that you have a civic, an intellectual and administrative centre such as is not to be found anywhere else in the British Isles. I have seen nothing on this side of the Channel at any rate which in any way approaches the buildings you have here. You have a wonderful group of buildings and you have also one or two magnificent avenues. I know nothing like the fine vista of trees and avenue that you call King Edward VII Avenue. But also you have a collection of undeveloped and confused buildings. What is the reason? I have no doubt the real reason is there is no organisation for dealing with this very complicated question. Dealing with lay-outs such as you have in Cardiff is not a matter for an engineer, nor for an architect; it is for a group of artistic specialists of the highest calibre. You must have a sculptor, an architect and you ought to have also a painter and an engineer. I

always think of that extraordinary commission that was appointed to deal with just such a confusion as you find in Cardiff in front of the great Capitol at Washington, and I should like to know—perhaps Professor Zug can inform us—how it was that some inspired individual or individuals came to the conclusion that it was necessary to appoint a commission to deal with the matter. It was satisfactorily dealt with; it was, as Mr. Buckland said, prepared with careful consideration, and then opened to public criticism. The laying out of important central areas is a much bigger question than city councillors realise. Only a combination of the best brains and thought can ensure the best results. Mr. Buckland must remember that America is governed in very different way from ourselves. America, with all her town-planning schemes and art commissions, is in water-tight compartments so far as her municipalities are concerned. We have a great central authority and our local authorities wait for White Papers, and so forth, and the operating of the central authority. I cannot say that the time is yet ripe for the Government to pass a measure dealing with the appointment of art commissions in connection with all our local authorities. I am rather more inclined to think that it is a resolution which should first come before the Council of the Institute, who might, perhaps, consider first of all the question of getting local authorities independently to appoint something more flexible than statutory commissions. I have had experience with these art commissions with Mr. Buckland in Birmingham. I think he was encouraged by what was done in Liverpool by the Liverpool Civic Guild, which I regard as one of the first of its kind. We had as the Chairman of the Civic Guild the Chairman of the Liverpool Art Committee, who used this guild as a buffer between municipal criticism and art direction. I think that the organisation should consist of some important civic authority—the mayor if possible—with certainly three or four members appointed by professional bodies outside municipal control. I am glad that Mr. Buckland has brought this resolution forward and I have great pleasure in supporting it.

Professor ZUG: During the past 24 hours some of you have said complimentary things with regard to America. As opposed to that I should like to give you a definition of American architecture expressed by a critic. He said that American architecture was one thing to cover up another thing in imitation of a third thing which, if genuine, would not be worth while. That was in the eighteen-nineties. That was before the great development and renaissance of American art. The last speaker mentioned the Fine Arts Commission at Washington. That happens to be the commission in America which has done the best work, and its inception was due to the influence of President Roosevelt's responding to the request of the American Institute of Architects. The British Institute can do the same thing for England. I hope you will remember when I speak that I am not an architect or a city planner, but a professor in an American college. I therefore speak in an unprejudiced way. There are two things I want to say in regard to art commissions and civic and landscape architectural development. My friends the landscape architects and city planners of America say that the first step in all civic matters is to rouse public opinion. Walter Moodie's book on "What is a City?" deals with the necessity of public propaganda.

In Chicago they have used it in all manner of ways—in the newspapers, on the moving pictures, and in text books for the lower grades of the schools as well as for the higher grades. If you are going to succeed with commissions you must have the people behind you. The city planners and landscape architects in the United States feel very strongly that some architects, I mean some American architects, think so much of their buildings that they forget all about the city and all about the approach to the buildings. They want their building in the most important place. And so the city planners and landscape architects insist very strongly that every civic commission ought to have a city planner and landscape architect as a member of the commission. I mention this because the city planner and landscape architects are trained to have the broad vision that is necessary, and unless you get a man with this vision, whether he is an architect or a city planner, your commission will never achieve its greatest success. It is true that Burnham was an architect and only an architect at first, but was led by circumstances into becoming a city planner. If you cannot have a city planner, then have someone whose training has developed a vision which reaches into the future.

Mr. E. C. M. WILLMOTT [A.]: I feel that it is fortunate for Cardiff that this conference has taken place this particular year and that we have had the paper by Mr. Buckland on this particular subject. I hope a copy of it will be sent to every member of the local city council. As Professor Zug said, we have to stir up public opinion immediately. We can do our share in Cardiff by stirring up opinion amongst the City Council. I feel very sure that a paper given by such a distinguished authority and backed with the authority of the premier Institute of the country would carry great weight and would eventually result in an attempt to set up a commission in Cardiff. I am not sure what the legal position of the commission would be, but I see no reason why we should not start a civic art committee in connection with the city council. We have heard pears of praise about what has been done in the lay-out of Cathays Park, but every architect knows that if he cared to criticise it he would find many vulnerable points. The one great feature, the central avenue, is due to the late Marquis of Bute. It is, it is true, a magnificent avenue, with an approach from nowhere which leads to nowhere. I believe that if a man of large vision had had the handling of it we should not have had an isolated example of town planning but a linked up and properly connected scheme.

Lt.-Col. W. G. NEWTON [A.]: I should like to take up a point which the last speaker raised, and that is the question of publicity. I feel we are dealing with a matter which affects lay opinion, general opinion, and civic opinion, yet when we come to the question we creep like early Christians into our catacombs. It is true we have the Press, but to be effective in the Press you have to speak in headlines. I would like the Press to take down these two headlines. First, in the matter of civic beauty one must think in generations and not in periods of yearly rates, and, secondly, one ought to realise that beauty is a civic right. The American civic commissions are very interesting in their origin. They started from the general excitement connected with the World's Fair Exposition in 1893, and subsequently Mr. Burnham brought forward his far-sighted

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plan for Chicago. When Mr. Buckland was talking about the present state of the committees on taste in America it seemed to me that we are in danger of thinking in terms of ornamental gates, fancy lamp posts, and statues. If these committees are to have a broad vision they should not have compulsory powers for two reasons. In the first place, who will be on them? The old men and their views will become antiquated. The committees will become stereotyped, and, instead of being a help, in time a hindrance. Secondly, it is only if their views are supported by public opinion, by arguments and proof, that they will be really broad, alive, sound, and effective. The committees must win their way by the fact that their views are right.

Mr. T. A. LLOYD [F.] : I am perfectly convinced that unless we have behind these commissions an available means of instructing public opinion our efforts will be in vain. I understand that in America they have what are called civic clubs formed for the express purpose of educating public opinion and fostering right ideals in regard to city planning. I think we might do very much more than we are doing in that direction. In Cardiff there is a particularly good opening for such a club. It has occurred to me that one very useful method of getting some of this work done is to tack it on to the town planning scheme.

Mr. BUCKLAND (replying) said the danger is that city councils may profess to recognise these civic committees and yet never refer anything to them. Why I put the resolution forward is that the time has come for the Institute to take what steps it thinks advisable. Do not let us imagine that we can do anything with city councils. Let us go to the top and get the higher powers to force the local authorities to consult the commission. I am in perfect agreement with Mr. Newton that these bodies should not have statutory, compulsory powers, but that they should depend upon the support they receive from public opinion. I am going to suggest that we must not leave Cardiff without strengthening the hands of our Cardiff colleagues. We must do something to bring before the Cardiff authorities the opinion of this conference that all is not well with Cardiff and that Cardiff ought at once to take steps to see that they are going to have plans for future developments which are going to be something fine and worthy of the buildings already put up. I do not know what form this matter should take, but Mr. Keen thinks that it would be advisable that the Cardiff Society should send a letter to the authorities voicing the views of this conference.

Mr. IVOR JONES suggested that some of the experts present should send a letter to the South Wales architects pointing out the excellent opportunities that existed in Cardiff for the setting up of an art commission, and they could then lay this before the city heads. He was sure it would carry them a long way and would be far better than sending copies of Mr. Buckland's paper to the city councillors.

On the motion of Mr. Hall, seconded by Mr. Ward, this suggestion was agreed to.

LIST OF MEMBERS.

Professor S. D. Adshead (*Vice President R.I.B.A.*), Miss K. Atkins, V. Banks, H. L. Black, Major Harry Barnes, M.P. [F.], H. A. Barton, C. F. Bates [A.], Gordon S. Biss, A. L. Birkett, T. S. Bowes [A.], H. T. Buckland [F.] (*President Birmingham A.A.*), H. A. Bull, H. M. R. Burgess [A.], F. G. Bruton, E. B. Byrd, E. S. Charlton [A.], Mrs. Charlton, C. E. Compton, W. Cook, Major Herbert C. Corlette, O.B.E. [F.], C. M. Davies, G. Colin Dyer, Wm. Eaton [A.], A. G. Edwards, J. Ralph Edwards [A.], C. H. Evans, H. G. Evans [A.], G. Vincent Evans [*Licentiate*], A. P. Fawckner, Lieut.-Col. E. H. Fawckner [F.], Alec. G. Fletcher, Major C. B. Flockton [F.] (*President Sheffield Society of Architects*), Gilbert Fraser [F.] (*President Liverpool Architectural Society*), P. R. Fry, W. H. George [*Licentiate*], Thomas Gibb, R. W. T. Griffiths, H. R. H. Gilbert, John P. D. Grant [A.], Hastwell Grayson [F.], J. E. Gregory, E. Greenleaver, J. F. Groves [F.], J. A. Hallam, E. Stanley Hall [F.], Edwin T. Hall [F.], J. R. Hallett, F. W. Harper, E. Vincent Harris [F.], Mrs. Harris, J. C. Harvey [A.], L. S. Hatchard, F. Courtney Hatcher, A. J. Hayes, Mrs. Hayes, F. H. Heaven [A.], A. W. Hemmings [F.] (*President Manchester Society of Architects*), R. Holt, Mrs. Holt, Francis Hooper [F.], A. C. Huffell, Mrs. Huffell, Geo. H. Hurd, W. A. James, Miss R. Jeffrys, C. F. Jones [A.], D. Pugh Jones, Mrs. Jones, Francis Jones [F.], Mrs. Francis Jones, Ivor P. Jones [A.], Mrs. Ivor Jones, J. Herbert Jones, Lewis Jones, T. Leonard Jones, C. H. Kempthorne [*Licentiate*], Mrs. Kempthorne, Arthur Keen [F.] (*Hon. Secretary R.I.B.A.*), W. Gardner Lewis, W. T. Watkin Lewis, T. E. Llewellyn, T. Alwin Lloyd [F.], G. B. Zug, A. G. Lynham [A.], Ian MacAlister (*Secretary R.I.B.A.*), J. A. Metcalfe, T. R. Milburn [F.] (*President Northern A.A.*), Leonard Munro, David Morgan, W. D. Morgan, Fredk. Musto [A.], Mrs. Fredk. Musto, V. L. Nash, W. G. Newton, M.C. [A.], W. O. Oakley, C. E. Page, Eric C. R. Page, E. Harding Payne [A.], Mrs. Payne, D. Phillips, W. T. Plume (*Hon. A.R.I.B.A.*), H. C. Portsmouth, Oliver T. Portsmouth, Ernest Prestwich [A.], W. S. Purchon [A.], Jacob Rees, J. Cook Rees, Mrs. Rees, T. Taliesin Rees [F.], Mrs. Rees, Miss Rees, J. C. Richard, L. Robertson [F.], W. Rosser, G. Sanville [A.], Wm. G. Seaton, G. Valentine Shepherd, A. Dunbar Smith [F.], Mrs. A. Dunbar Smith, Miss B. Smith, Edgar Smith, Edwin Smith [A.], J. Ll. Smith [*Licentiate*], R. Tatam, H. Teather [F.], C. S. Thomas, W. D. Thomas, Percy Thomas [F.] (*President South Wales Institute of Architects*), Mrs. Percy Thomas, Bryan W. R. Thomas, S. Knight Thomas [A.], W. M. Traylor, G. A. Treharne, C. Ward [*Licentiate*], C. F. Ward [F.], Mrs. Ward, John Ward, W. D. Walters, Mrs. W. D. Walters, Edmund Ware, Paul Waterhouse (*President R.I.B.A.*), H. G. Watkins [F.], Osborne V. Webb, Sidney Williams, J. Maurice Williams, David T. Williams, V. S. Williams, John Williamson [A.], Mrs. Williamson, E. C. M. Willmott [A.], Col. Cecil Wilson [F.], Mrs. Wilson, R. H. Winder [A.], Mrs. Winder, Wm. Woodward [F.], J. Hubert Worthington [A.], J. B. Wride [*Licentiate*].

CONFERENCE COMMITTEE.

Percy Thomas [F.], *President South Wales Institute of Architects*, Cecil Wilson [F.], Harry Teather [F.], Sidney Williams, T. Alwyn Lloyd [F.], J. P. Grant [A.], W. S. Purchon [A.], E. C. M. Willmott [A.], T. E. Llewellyn, Ivor P. Jones [A.], *Hon. Secretary S.W.I.A.*

A Successful Conference

A RÉSUMÉ OF THE PROCEEDINGS

The Programme of the Conference, of which details were published in a recent Journal, was carried out with complete success. Members were present from many parts of the country, the largest contingents being from London, Manchester and Liverpool.

The members who arrived in Cardiff on the 8 June were received in the evening by the Lord Mayor (Councillor F. H. Turnbull) and the Lady Mayoress at the City Hall. During the course of the evening a brilliant performance was given by one of the famous male voice choirs from the Rhondda Valley. The vigour and beauty of the singing of the miners was a revelation to the non-Welsh visitors. A most interesting exhibition of prints and photographs illustrating the history of Cardiff and a model of the National Museum building were on view.

The business of the Conference was begun on the 9th, when, in the Assembly Hall of the Technical College, where, under the chairmanship of Mr. Percy Thomas [F.], O.B.E., President of the South Wales Institute of Architects, Major Harry Barnes, M.P., delivered a lecture on "Unification and Registration." Time did not permit a discussion, and the rest of the morning was devoted to a visit to the City Hall and Law Courts in Cathays Park. In the afternoon the Glamorgan County Hall was visited, and Mr. E. Vincent Harris [F.], the designer of the building, conducted the party over it, and answered many questions on its planning and construction. The Welsh National Museum was then visited, and Mr. A. Dunbar Smith [F.], who, with the late Mr. Cecil Brewer [F.], designed the building, acted as guide. The party was then entertained to tea in the Museum by the invitation of Alderman Treharne James, Chairman of the Management Committee. A vote of thanks to the authorities of the Museum was moved by Mr. Francis Jones [F.], President of the Manchester Society of Architects, and responded to by Lord Treowen, Chairman of the Museum.

The Conference Banquet took place in the evening at the Park Hotel. More than 110 guests were present, under the Chairmanship of the President of the Royal Institute, and many of the leading citizens of South Wales, including the Lord Mayor and Lady Mayoress of Cardiff, honoured the Royal Institute by their attendance.

On the morning of the 10 June the serious business of the Conference was completed by a Lecture by Mr. Herbert T. Buckland [F.], President of the Birmingham

Architectural Association, on the subject of "Civic Architecture and Advisory Art Commissions." An animated discussion followed, with particular reference to the planning of the famous Civic Centre of Cardiff.

A visit to the Cardiff Fire Station followed. The designer, Mr. Vincent Harris, was present, and the Chief Constable staged a thrilling demonstration of the various activities of the Brigade. Mr. Gilbert Fraser [F.], President of the Liverpool Architectural Society, expressed to the Chief Constable the thanks of the party.

The afternoon was devoted to a visit to Cardiff Castle, by the kind invitation of the Marquis of Bute. The architect of the castle, Mr. J. P. Grant [A.], conducted the whole party, which by now numbered more than 200, over the Roman fortress, the ruins of the Norman castle, and the mediæval palace, restored and decorated by William Burges. The visit developed into a delightful garden party in the beautiful grounds, and Mr. Arthur Keen [F.], Hon. Secretary of the R.I.B.A., requested Captain Grant to convey to the Marquis of Bute the cordial thanks of the Conference for his generous hospitality.

In the evening the closing scene of the Conference was a smoking concert at the Park Hotel, at which the members of the Conference were the guests of the South Wales Institute of Architects. The "Cymric Octette" sang National airs throughout the evening, and Mr. William Woodward [F.], speaking on behalf of all the visitors, expressed to Mr. Percy Thomas his appreciation of all that the South Wales Institute had done to ensure the success of the Conference, which had been one of the most delightful experiences of his life. Mr. Thomas briefly responded.

On Sunday, 11 June, some 50 visitors remained to take part in the *chars-à-banc* tour to the Wye Valley. The weather, which had favoured the Conference from the start, was perfect, and the tour was a complete success. Some two hours were spent at Tintern, where, after lunch, the party was conducted over the ruins of the Abbey by Mr. Trowbridge, of the Office of Works, who explained the methods that had been adopted in the preservation of the ruins.

The unquestioned success of this, the second of the Provincial Conferences of the Royal Institute, was due entirely to the energy, enthusiasm, and organising ability of the local Conference Committee, which, under the President, Mr. Percy Thomas, and the Hon. Secre-

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tary, Mr. Ivor Jones, were at work for months arranging every detail of the programme.

Our thanks are especially due to the members of this Committee, whose names appear elsewhere, to the Stewards, who worked so indefatigably to prevent the slightest hitch from taking place, to Mr. C. F. Bates and Mr. C. L. Jones, who jointly designed the beautiful cover of the Programme; to Mr. W. S. Purchon, who managed with such striking success the press arrangements and the "publicity" side of the Conference and arranged the exhibition of students' drawings which was on view in the Assembly Hall of the Technical College during the Conference; to Captain J. P. Grant, who gave us such courteous help in connection with the visit to Cardiff Castle; to Mr. Vincent Harris and Mr. Dunbar-Smith for their services in the visits to their buildings; to Miss Atkins, the lady-student of the School of Architecture, who so gracefully presented our bouquet to the Lady Mayoress in the City Hall on the night of our arrival; and to the band of Boy Scouts, whose services as messengers and guides were beyond praise.

We have also to record our most grateful acknowledgments to those hospitable citizens of Cardiff who did so much to contribute to the pleasure and interest of our visits. The Lord Mayor and Lady Mayoress, whose reception at the City Hall was so delightful an introduction to the Conference; the Marquis of Bute, who entertained us so bountifully at the Castle; the

Earl of Crawford and Balcarres; Sir Lionel Earle, and Sir Frank Baines, who arranged our inspection of the works at Tintern Abbey, and Mr. Trowbridge, who showed us all that he was doing; the Chief Constable of Cardiff, who arranged our visits to the Law Courts and the Fire Station; the authorities of the National Museum—Lord Treowen, Alderman Treharne James, and Dr. Evans Hoyle—to whom we are indebted for our visit to that beautiful building; the Town Clerk of Cardiff, to whose courtesy we are indebted for our visit to the City Hall; the County Councillors of Glamorgan, who permitted us to inspect their Hall; the Technical Instruction Committee, by whose kind permission the Conference was held in the Technical College; Mr. L. Harris, the Marquis of Bute's agent, who assisted us so materially in our visit to the Castle; the editors of the great newspapers of South Wales who, both before and during the Conference, took so lively and helpful an interest in our proceedings; all these, and others, who will forgive us if we have omitted to acknowledge their services, have placed us so heavily in their debt that we can but place the fact on record and trust that they will realise our gratitude.

I. M.

Photographs of the guests at the Banquet and the Garden Party at Cardiff Castle can be obtained from Messrs. H. J. Whitlock and Sons, Duke Street Arcade, Cardiff. The prices are, respectively, 4s. unmounted and 5s. mounted for the former; and 6s. 6d. for the Garden Party group.



The History of the Mansion House*

By ALFRED W. S. CROSS, M.A., VICE-PRESIDENT.

IN this recently published work its author, Mr. Sydney Perks, F.S.A., F.R.I.B.A., in addition to dealing with the site of the Mansion House, the Walbrook, the Stocks Market, the early Church of St. Stephen, the old Statue of Charles II. and the Surveys of London, made after the Great Fire, gives us a detailed description of Dance's building, including an account of the various alterations carried out in the nineteenth century. This important volume is a very welcome addition to the comparatively few works we possess dealing, authoritatively and exhaustively, with our ancient civic buildings. Owing to the special facilities he enjoys, Mr. Perks has been enabled to make full use of the City archives, at Guildhall and elsewhere, in collecting reliable and unimpeachable information relative to the Mansion House. And he is to be congratulated upon the very painstaking and conscientious manner in which he has carried out his self-imposed and self-sacrificing task.

Centrally situated in the ancient Roman *Londinium* near the eastern bank of the Walbrook, then a narrow stream about three or four feet in depth, the neighbourhood of what is now the Mansion House, even in those remote days, was the centre of civic activities.

The Mansion House, the official residence of the Lord Mayor, stands partly upon the site of the old Stocks Market, so named from the stocks set up for the punishment of offenders that formerly stood there, and partly upon the precincts of the ancient Church of St. Mary Woolchurch. Founded by Henry le Waleis, Mayor of London in the tenth year of the reign of Edward I., the Stocks Market soon became one of the five privileged marts of the City. Stow refers to the second market building, erected in 1410, during the reign of Henry IV., and in a description of the open market place which was laid out after the Great Fire of London, Strype says :

Up further north is the Stocks Market. As to the present state of which, it is converted to a quite contrary use ; for instead of fish and flesh sold there before the Fire, are now sold fruits, roots and herbs ; for which it is very considerable and much resorted unto, being of note for having the choicest in their kind of all sorts, surpassing all other markets in London. . . . At the north end of the market place, by a water conduit pipe, is erected a nobly great statue of King Charles II. on horseback trampling on slaves, standing on a pedestal with dolphins cut in niches, all of freestone and encompassed with handsome iron grates. This statue was made and erected at the sole charge of Sir Robert Viner, Alderman Knight and baronet, an honourable worthy, and generous magistrate of this City.

The equestrian statue to which Strype refers had a curious history. In a transaction, recorded by Pepys, it appears that Robert Viner, merchant and goldsmith of London, made a profit of £10,000 through his successful efforts to negotiate a loan on behalf of King Charles II., and, grateful for the honours bestowed upon him by his royal patron, Viner determined to erect a statue of the King. But knowing little of art, or artists, he set about obtaining the statue as quickly and as cheaply as possible. His object was achieved with the aid of one of his mercantile correspondents at Leghorn, through whom a white marble figure, said to be that of John Sobieski, the heroic King of Poland, which, owing to some mischance, had been left upon the maker's hands, was sent to London. It represented the King on horseback trampling upon a prostrate Turk. Alterations made in the faces of the figures transformed that of Sobieski into an exceedingly bad likeness of Charles II. and that of his prostrate foe into one bearing, perhaps, some slight resemblance to Oliver Cromwell. But, by a most unfortunate oversight, the Turk's turban was allowed to remain on the Lord-Protector's head, and thus revealed the original purpose of the sculptured group. Long after the demolition of the Stocks Market this ridiculous monument remained prone and neglected in the purlieus of Guildhall, and the efforts made by the City Fathers to rid themselves of it are of some interest. Thus an advertisement was inserted in the *Daily Post* of 28 November 1737, giving notice that "the Committee appointed by Common Council to erect a Mansion House for the Lord Mayors of this City for the time being" intend to dispose of "the Timber, Boards and Tyles belonging to the several Sheds and Houses that lately stood on the Ground where Stocks-Market was used to be held, in different Lots ; (that is to say) the Timber and Boards in one lot, the Tyles in another, and the materials belonging to the Conduit, Pedestal and Horse in another lot." As no satisfactory offer was received for the purchase "in one lot" of the materials belonging to the "Conduit, Pedestal and Horse," another advertisement appeared in the *Daily Post* of 9, 10 and 12 December 1737, as the result of which, although "John Hoare" and "Mr. Long" both wanted the horse, for which Long offered £12, further consideration of the matter was adjourned. There is no mention of the sculpture again until 17 February 1738, when "the Lord Mayor informed the Committee he had talked with Mr. Viner at the House of Commons with reference to his claim for the horse, a stone Pedestal, Horse and Statue, of King Charles II. said to have been set up by Sir Robert Viner, an ances-

* *The History of the Mansion House.* By Sydney Perks [F.], F.S.A., F.S.I., 8vo, Camb. Univ. Press, 1922.

tor of the said Mr. Vyner." Although the Committee appear to have admitted the justice of the claim with quite unusual alacrity, yet it would seem that there had been some misapprehension concerning it, for when, on the following 3 March, the Town Clerk and Comptroller saw Mr. Vyner on the subject, he reminded them that the statue was erected by Sir Robert Vyner "by the consent of the City as an ornament, and that it should remain there till waisted or Devoured by time, and that he would have nothing to do in removing it, or taking it down, nor would he Receive the same." At length, in 1779, after many years of neglect, the statue was presented by the Corporation to Mr. Robert Vyner, another descendant of the loyal Lord Mayor, who at once removed it from London, and set it up in his country seat.

The records of the City Corporation contain several references to the "Lord Mayor's House" long before the erection of a permanent official residence was contemplated. But, as Mr. Perks explains, these early references only applied to their places of business at which the aldermen and citizens were then content to reside. An extract from the *Repertories* of that date makes it clear that, as early as 15 November 1670, the Corporation had under consideration a proposal "touching an house to be erected and continued for the constant habitation of the Lord Maiors of this Citty."

The ultimate selection in 1736 of the present site seems to have involved a considerable amount of preliminary discussion, as the alternative suggestions in favour of Leadenhall Market and Gresham College found strong support. It was eventually decided to have a limited competition for the building, and three well-known architects of the day, Gibbs, James and Leoni, were invited to attend the committee. Although he was then acting for the Corporation as Clerk of the City's Works, Dance was not asked at this stage of the proceedings to take part in the competition. "On 18 March a letter from Mr. Batty Langley was read, but the Committee made no order thereon." This letter, which was addressed to Sir Edward Bellamy, the Lord Mayor, was as follows:—

My LORD,—Being not very well, I cannot attend your Lordship and the Gentlemen of the Committee this afternoon, as I would gladly have done; wherefore I beg leave to inform your Lordship and ye Gentlemen of ye Committee, that as the Just Rules of Architecture have always been my study and as thereby I have demonstrated the many beauties and defects in our Publick Buildings; of which I lately published an acct in the *Grub Street Journal* under the name of Hiram—I therefore begg leave to inform yr. Lordship and ye other Gentlemen of the Committee that as I know myself able to compose a Design for a Mansion House with greater Magnificency, Granduer and Beauty than has been yet express'd in any—nay even in all—the Publick Buildings of this City taken together—I am therefore making a Plan, Elevation and Section for ye same (supposing it to be erected in Stocks Market) which

in abt. three weeks' time I shall have completed, and now beg leave that then, I may be permitted to exhibit ye same unto this Committee for consideration.

Mr. Justice Blackerbee of Parliamt. Stairs is my near neighbour, and who will further inform yr Lordship of my abilities, etc., if required.

I am,

Yr. Lordship's obedient Servt.
(sgd.) BATTY LANGLEY.

Parliament Stairs,

18th March, 1734.

read in Committee 18.3.1734-5.

On 1 April 1735 Leoni wrote from "Vine Street by Piccadilly" that his plans were ready. On 8 May 1735 Gibbs and Leoni both attended the Committee Meeting and handed in a "Draught of Plan," when it was decided that a sub-committee should view the sites of Gresham College, Leadenhall Market, and the Stocks Market. The three competing architects were consulted on 3 July 1735 relative to some details of their schemes for the erection of a Mansion House at the Stocks Market. On the same day the committee decided to abandon the idea of the Gresham College site. Meanwhile Batty Langley had been very persistent in pushing himself forward, and on 6 July 1735 he wrote the following letter to the Town Clerk:—

July ye 6th 1735.

Parliament Stairs.

SIR,—My Lord Mayor has informed me, that his Lordship has given you orders, for to give, or send me notice, of the time, when the Committee, appointed for building the Mansion House, have their next meeting. If you'll please to send to me at Parliament Stairs, near, Old Palace Yard, Westminster, such notice will be rec'd.

By Sir,

your humble Servant,
(sgd.) BATTY LANGLEY.

As the result of this letter Batty Langley was called before the committee on 17 July "at the Lord Mayor's request" and presented his plan. It was decided at this meeting that Dance should also be invited to submit a design, and the following letter was sent to each of the five architects now selected:—

SIR,—The Committee for the Mansion House desire you to Draw a Plan of a House for the Ground in that part of Leadenhall Market between the four Towers where the Leather and Hide Marketts are now held, the Dimensions of which Ground as Repted, to ye Comtee. is in ffront next Leadenhall Street from Tower to Tower about 130 feet, in Depth about 228 feet, and ye back from the west to ye arch near Gracechurch Street, about 120 feet.

Sent to JAMES.

GIBBS.
LEONI.
LANGLEY.
DANCE.

18th July 1735.

On 19 November 1735 the committee saw the architects and James, Gibbs and Batty Langley submitted

plans for the Leadenhall site, for which Leoni's plans were not yet ready. On the other hand, Dance delivered two designs, one for the Leadenhall Market site and one for the Stocks Market site.

In the following December the committee submitted a report to the Court of Common Council giving particulars of the Stocks Market and Leadenhall Market sites. They said the five architects had submitted plans for each site, and they were ready for instructions. On 28 March 1736 the Court finally decided to build on the Stocks Market site, and on 6 July 1737 the committee made their examination of the designs and estimates cost submitted by the following architects:—

Leoni	..	..	£26,000
Gibbs	..	..	£30,000
James	..	..	£30,000
Dance	..	..	£26,000

It appears that at this meeting "one Mr. Ware attended at the door, was called in" and presented a design to cost £23,000. "On the 27th of the same month all the designs sent in by the invited architects, together with one prepared by Mr. Ware without any directions" were brought forward by the committee before the Court of Common Council with a recommendation that the design by Dance be accepted. For some unknown reason Batty Langley seems to have retired from the contest at this stage of the competition, although he had prepared and submitted plans for the Stocks Market site. With regard to the remuneration made to the competing architects on 3 March 1737, the committee agreed to pay "Mr. Gibbs one hundred guineas for his trouble in attendance and drawing plans by order of this Committee. Mr. James seventy-five guineas, Mr. Leoni fifty guineas, and Mr. Batty Langley twenty guineas."

The space at my disposal does not admit of more than a passing reference to the interesting accounts given in Chapters XI., XII., and XIII. of the building of the Mansion House, and of the later alterations.

The excellent illustrations, which are numerous and well chosen, comprise reproductions of most of the competitive designs received for the building, although Mr. Perks has been unable to illustrate Leoni's scheme. And the value of the written matter is enhanced by the inclusion in the work of numerous old maps, plans and views, which cannot fail to be highly appreciated by all lovers of the architectural history of our metropolis. Although the book appears to have been carefully prepared for the press, there is a typographical error in the second paragraph of Chapter II. in which reference is made to the publication, for the first time, of extracts from the *Liber Albus*. But as there are no extracts given in this chapter from the *Liber Albus* and several from the *Liber Horn*, it is obvious that the words *Liber Albus* should read *Liber Horn*.

What is Architectural Design?

On Thursday, 4 June, the third of the series of public lectures, held under the auspices of the Literature Committee of the Institute, was delivered by Mr. D. S. Maccoll, the Keeper of the "Wallace Collection." The title of his discourse was "What is Architecture?" and his observations on this subject were naturally received with the greatest interest by members of the Institute. Mr. Maccoll is not only eminent as a writer upon painting and sculpture, but he gave indisputable evidence of a very wide knowledge of architecture, and one is tempted to express regret that his acute critical powers should not more often be placed at the service of our profession. Unfortunately, I did not have the privilege of examining the actual text of Mr. Maccoll's lecture, so, in writing this short impression of it, I must rely upon my memory of the arguments which he advanced, and can necessarily give but a very inadequate account of the wealth of illustration and the felicity of expression with which Mr. Maccoll delighted his audience.

One of the chief merits of Mr. Maccoll's exposition was that he was able to do justice to the utilitarian aspects of architecture without appearing to ignore or disparage the æsthetic motives which have ever prevented the artist from resting content with the satisfaction of utilitarian needs alone. In fact—and this is really an important test by which the lay commentator upon architecture is judged by those who practise this art—he was prepared to admit the logical propriety of the decorative use of the classic order for the purpose of giving emphasis and rhythm to the various parts of a façade. As it is a grievance of architects that the educated lay public, which for the most part is still under the influence of Ruskin, has no comprehension of the function of the orders, and frequently refers to their modern use in ferro-concrete buildings as little less than a sham, it is comforting to find that Mr. Maccoll is willing to lend his authority to the opposite view. In support of his contention that an æsthetic form must not necessarily follow the lines of construction, he took a very happy illustration from the art of dress, and showed that the charm and beauty of a costume is largely dependent upon the fact that at some points it is both governed by and emphasises the structure of the body, while at other points it deliberately departs from it and follows a law of its own. Yet it cannot be denied that under certain conditions a strict obedience to the dictates of practical convenience and structural fitness will lead to beauty, and Mr. Maccoll took as an example the form of a well-made sailing ship as it wrestles with wind and wave. Here all other con-

siderations appear to have been sacrificed to the urgent need of making the vessel seaworthy in every respect. And yet even in this case a certain latitude is allowed, for, given the main dispositions of the ship's weight and the necessary section lines of that part which is permanently immersed, the superstructure can be of the most varied character. The wooden battleships of the eighteenth century showed evidence of a remarkable power of architectural design; not only the decorated prows, but the exquisite external treatment of the stern cabins, the rhythmical pattern of the square port holes, and the elaborated punctuation of the tall masts all combined to give an effect of grandeur, of a maturity of artistic conception such as a simple sailing boat could never suggest. But all ships have this advantage, that the very conditions of their movement determine the inflection—the obvious difference between the shape of stern and bow, which does much to give the structure an appearance of vitality. A false symmetry in this respect would spoil the design immediately. Again, the formal canons are directly applicable to ships, for just as Mr. Maccoll found reason to disapprove of a window cut in two by a vertical sash bar, a duality of masts or funnels can be equally offensive. Everybody knows that the *Tiger* is much more beautiful than the *Iron Duke*! But although the analogy from ship design can usefully be introduced into a discussion upon architecture, there is one important respect in which this analogy must break down. A ship is a thing complete in itself; it is in this respect like a tree or like one of the lower animals of which the beauty can be conceived as an isolated phenomenon, but the buildings of a city form a community, and they must express a scale of social values. The charm of architecture lies not only in the elegance of an individual house but in the subtle relationship of one building to another.

Mr. Maccoll, owing to the limited time allotted to him, was unable to give us the benefit of the whole of the address which he had prepared; it was his intention before discussing his own views upon design to criticise some of the architectural theories recently propounded. As it was, he confined himself to an extraordinarily interesting analysis of the main contentions of Mr. Geoffrey Scott's "Architecture of Humanism." Whether he altogether did justice to the destructive power of that outstanding work, in which the worst, the most tiresome, and the most plausible architectural fallacies have been so brilliantly exposed, is perhaps doubtful, but then it was clear that Mr. Maccoll was out to do a little destruction on his own account, for he directed his critical attention almost entirely to the last chapters of Mr. Scott's volume, in which the psychological basis of our appreciation of architecture is discussed. I do not attempt to reproduce Mr. Maccoll's penetrating comments upon those chap-

ters, but confine myself to a passing reference to just the one argument, where he says the qualities of "Humanism" that Mr. Scott attributes to the Baroque style—the "soaring," the "springing," and other such symbols of vitality—are equally to be found in a Gothic church. I should like to put on record, however, the regret, which I know to be shared by many members of the Institute, that Mr. Geoffrey Scott himself should not have been present to take part in this debate.

The important question of design in perspective occupied a good deal of Mr. MacColl's attention, and he brought to the consideration of this problem the freshness of vision which is derived from the habit of concentrating upon the pictorial significance of an architectural composition. When a building is finished, what one sees is not the whole building but one particular picture of the building, and a picture is essentially a composition in two dimensions. And as these pictures are almost infinite in number, what possible control can the architect have over them? To this the architect would perhaps reply that, although he designs in the solid, the "distortion" of perspective is of such an orderly and harmonious character that it can never either obliterate or disguise the synthetic relationship between the parts of an architectural composition when once this relationship has been established in the solid.

I will conclude by expressing the hope that Mr. MacColl's lecture will shortly be published in a form which will make it accessible to all architects.

A. TRYSTAN EDWARDS [A.].

The Study of Design in Decoration

By HUBERT C. CORLETTE, O.B.E. [F.].

Every architect uses archaeology with a purpose. That purpose is practical. He is not solely concerned with the historical side of art, for as he is, or hopes to be, a producer, he is wise when he does not refuse to learn all he can from past masters in any school of design. But the archaeologist who is only engaged with an effort to reconstruct the past out of present relics is too often incapable of appreciating real values in modern design. He seems disposed to judge all efforts to produce by standards which encourage hypocrisy. In art, especially in architecture, this peculiar vice is a last refuge of destitution. It teaches men to evade risk and avoid adventure. It is a form of insurance against incompetence by resort to a policy of reproduction. But reproduction in the arts is never a living motive. And anything that emerges from such an aim is still-born. Therefore, it is that in architecture and all the allied arts we must make our study of old things, done in the past, serve our purpose in new things

we wish to do in the present, so that we may try and produce something which shall be a legacy for the future.

When Mr. W. Harvey read his paper on "Colour in Architecture" at the Institute recently, he illustrated his observations by some of his own valuable studies of early design in colour decoration. These drawings were fine examples of pencil and brush craftsmanship. But they were much more than drawings, for they had a clear architectural purpose in them. They were serious studies of methods in design. And as they were drawn to scale they provided valuable information about the need of a well considered relative scale in decoration when it is used to emphasise and express architectural forms. It was possible to see from these drawings that the wall planes or vault surfaces were still functional. None of the colour designs upon them had been used with an effort to transform the structural entities of a building by the flimsy realism of picture making in positions where it is often misapplied. In those drawings which showed mosaic work, stained glass, or the use of marbles, and other substances, it was possible to see how the old designers allowed the materials, in and with which they worked, to define, even to dictate, the method and manner of design which could be used. And it was so very obvious that in doing so the materials themselves had suggested ideas both of composition, character, and colour. Stained glass was a constructed scheme of colour requiring technical craftsmanship of many kinds to produce it. But it was never handled as if the subject to be presented could be treated in the same way as a picture painted on canvas. Nor was mosaic work dealt with as if it was put in its place like fresco with a brush on a plaster surface. Differences of texture and of material were allowed in this way to tell their tale as part of the decorative scheme. And, in the studies of Saracenic tile design, it was apparent that, apart from the object of providing colour, the small scale of much of the work on large wall surfaces was handled with masterly purpose. For this small scale on broad surfaces introduced a new sense of texture, and provided a comparison by which sizes both of height or expanse could be felt. And, while it did this, it was used so that the complexity and intricacy of detail did not destroy the large breadth of the conception as a whole.

These are some suggestions of method and of principle which may be read in studying old work as books full of learning for those who can glean it. Drawings may in some degree be regarded as translations or transcripts from the original text, perhaps. But if, in order to understand the written thought of earlier civilisations, we sometimes use English versions of the originals, we may learn much which would otherwise be hidden. And, as all design in art is unwritten thought, we do well to try to discover what it teaches—for it does teach. It teaches much more than technical

method. It is a mode of expressing unspoken ideas and ideals. These we must try to discover, as well as the secrets of method by which they are given voice in the silent recesses of some mighty dome, or amid the living curves that vault across a Gothic nave, itself an inspiration, covering things inspired, and built on a practical, rational, development of thought-suggesting construction.

It is a common view that architects are not concerned with, know little of, and care less for decorative design in colour. It is a thoroughly mistaken view, as we all know among ourselves. But it is evident that a public education in the value of mural and other decoration is taking place around us. The Royal Academy is giving, as it should, an admirable lead in the process next winter. And it will, presumably, endeavour to show what has been, and is being, done by modern designers to provide colour in our buildings. Perhaps as so much can be learnt from old examples, as a guide for present practice, the R.I.B.A. could also help in another direction. Many valuable studies of such examples have been shown during some years past. But a representative collection of such studies, if exhibited in the Royal Institute Galleries, might be useful in giving public evidence of the fact that colour was, in the past, always considered an essential factor in architecture. And, at the same time, while being educational in this way, such an exhibition might be made to serve a practical purpose in the education of modern designers.

Review

ENGLISH RENAISSANCE WOODWORK, 1660-1730: *A Selection of the Finest Examples of Monumental and Domestic Woodwork of the Late Renaissance in England.* By Thomas J. Beveridge. [London: Technical Journals, Ltd.]

This is a truly monumental work. It contains 80 plates of measured drawings illustrating the decorative woodwork and carving of the Wren period. There are 17 plates of the choir stalls and screens of St. Paul's Cathedral, 12 of the woodwork of Hampton Court Palace, 10 of London churches, 14 of various Oxford colleges, and 15 of Cambridge. The method of illustration is by carefully drawn elevations of the selected subjects, with such explanatory plans as are necessary, and a few key plans of the rooms of which the woodwork forms part. Further details of mouldings and carving are then drawn and reproduced to the scale of a quarter full size. These are mostly in a thick ink outline, shaded also in strong line.

In the face of all this industry it may seem a little captious to complain, yet is the whole book so good that one begrudges the something of disappointment that it is not wholly satisfying. Mr. Beveridge's convention of draughtsmanship appears to have coloured

his vision, and is almost too robust for the delicacy of much of the work he illustrates. The skill is here, and such drawings as those of the altar rails of Trinity College Chapel, Cambridge, are in every way admirable. Sensitively drawn in pencil and tinted, reproduced by a tone process, they give the spirit and "woodiness" of the work far more truly than do some of the indiscriminately thick lined ink drawings. One finds oneself wishing that the actual pencil drawings of the carving made on the spot by Mr. Beveridge had been reproduced instead of the pen translations.

For a truer appreciation of the spirit of the Wren woodwork one may suggest the study of this book of measured drawings side by side with the photographs of Mr. Avray Tipping's book on Grinling Gibbons. Each would then correct or supply what was lacking in the other, and the rigid data of the one be transmuted by the finer presentation of the second. The elevational drawings are good, particularly the gallery screen of the south choir aisle of St. Paul's, and a fine doorway at the head of the staircase there, the corner chimney piece in the King's state dressing-room and the walls of the King's Gallery at Hampton Court, the vestry of St. Laurence Jewry, the Hatton Garden dining room, and the Combination Room at Clare College. Here the fine architectural character of the design of the woodwork is clearly seen. Window, door, fireplace, or long stately panel take their place in the ordered effect of the whole room. There is nothing casual or picturesque.

It is well to be reminded by such a book as this of the great value of this heritage of the Wren woodwork. As joinery it is superb craftsmanship. In design it is as expressive of the movement of its age as is the architectural design of the exterior façades. It emphasises to a large degree the change in ideals of the time, yet in its earlier stages may well have been carried out by the same craftsmen who had worked the small panels and shallow pilasters of Aston Hall. The simplicity and comparative fewness of the mouldings used are remarkable. The bolection panel moulding used at Hampton Court is found also at St. Paul's, at the Kensington Orangery, and in several chambers in Gray's Inn. The fine sumptuous effect given by the projection of the panel beyond the face of the stiles or framing was evidently fully appreciated by these joiners, for we find it everywhere.

The co-operation of the architect and the craftsman was never more happily effected than in this partnership of Wren with his woodworkers and carvers. In his woodwork, and especially in the domestic joinery, Wren seems to be more human than in some of his greater works, as though the rearer of mighty domes had permitted himself to take a little relaxation, a little homely pleasure, in the design of such things as the angle fireplaces at Hampton Court and the woodwork

surrounding them. This book, then, is one which all students of the period will find interesting and useful. Should any remarks of mine send them to the actual woodwork to compare the effect with Mr. Beveridge's drawings, he, I am sure, will be the last to complain.

W. H. ANSELL [A.].

THE RELATION OF ARCHITECTURE TO HISTORY.

Mr. Arthur Keen, in a recent letter to *The Times*, supporting a plea for better education in the fine arts and for recognition by the universities of art as a subject of study, "without which education is quite incomplete," raises a point, so far as the art of architecture is concerned, which has been very inadequately realised by our historians. The great historians—Gibbon was to some extent an exception—have failed to give full recognition to the importance of architecture as a "historical document" in the explanation of the life of past ages; and it may also be said that historians of architecture have, until recent times, been inclined to leave a little out of account the historical circumstances in which great building has been produced. The importance of architecture in this connection is admirably illustrated by Mr. Keen. "Art," he says, "in one form or another, has been so great a factor in human life at all times that it provides complete and reliable evidence of the facts of history. The growth of civilisation, the distribution of races, intercourse between nations, trade and commerce, war, religion—all are illustrated by it with the utmost fidelity. May I take such a simple illustration as the architecture of this country for, say, five or six centuries after the Conquest? Each building by the fashion of its mouldings and all the peculiarities of its structure can be dated within a very few years; and the inevitable result of this is that we can tell where and when monasteries flourished and when the parish church came into its own; at what period frontiers were defined and fortified; to what places French and Italian culture penetrated; when municipal institutions flourished; what trades were developed in particular places; and, broadly, all the facts of national development. The heraldry tells us about the ruling families and the alliances that they formed. The sculpture is far more than a decoration; it is a record of life and work and religious belief: just the things that a student of history requires to know. In domestic life the evolution of the dwelling-house from the Norman keep down to the riverside houses of the eighteenth century, accurately dated in every century and every change made apparent, is a definite record of the conditions in each period. Indeed, the connection between art and history seems so obvious that the neglect of it in the universities is a most curious thing."

JOURNAL OF THE ROYAL INSTITUTE OF BRITISH ARCHITECTS

CAMBRIDGE UNIVERSITY BOARD OF ARCHITECTURAL STUDIES.

The Board of Architectural Studies of the University of Cambridge have appointed Mr. D. Theodore Fyfe, F.S.A., F.R.I.B.A., as Master of the Cambridge University School of Architecture. Mr. Fyfe will take up residence and duty at the opening of the Michaelmas term. The school also has as its officers Mr. T. H. Lyon, M.A., of Corpus Christi College, Director of Design, and Mr. H. C. Hughes, M.A., A.R.I.B.A., of Peterhouse, assistant instructor. The lecturers include Professor Beresford Pite and several university professors and lecturers. The lecture list for next term will be issued shortly.

In connection with the foundation of the new School of Studies at Cambridge, Professor Beresford Pite, on 5 July, wrote to *the Times* :

"Since the momentous discussion in your columns upon 'a proposed diploma in architecture at Cambridge,' in February 1908, considerable progress has been made in the practical recognition of art in that University. I cite from the official 'Students' Handbook,' page 537, for 1920-21.

"In June 1908 the University established an examination in architecture, and in 1912 a Board of Architectural Studies was established to take charge of it and of the instruction in architecture. In June 1913 a revised schedule of the examination was passed by the Senate and came into force in June 1914. In June 1921 the University established an examination in architectural studies for the ordinary B.A. degree and approved regulations for the inclusion of the history of art among the principal subjects. This new examination in architectural studies will gradually, beginning in the Easter Term, 1922, supersede the other examinations."

"Candidates for the ordinary B.A. degree following courses of study covering three principal subjects (with subsidiary subjects) are permitted to select as one of their principal subjects the history of art. The examination includes :—(1) General history of art ; (2) history of architecture, classical, medieval, or Oriental ; (3) Renaissance and modern architecture ; (4) town planning ; (5) theory of art in relation to architecture ; (6) subjects for an essay. Students of architecture are awarded the ordinary B.A. degree after keeping nine terms, and passing first, second and third examinations, together with drawings and testimonies of study. The School of Architecture has its own studios, where instruction in drawing and design is given, and where students can work continuously, under the direction of the staff. This school includes students who are not purposing to become professional architects, and it has opened avenues of study in art that are not limited to technical architecture.

"The encouragement of the wider comprehension

of art and of its bearing upon the practical requirements of life has thus been undertaken by the University."

Mr. Fyfe won the Architectural Association Travelling Studentship in 1899, and was architect to the Cretan Exploration Fund, the British School at Athens, and Sir Arthur Evans's excavations at Knossos from 1900 to 1904, during which time he had opportunities for travelling extensively in Italy and, besides studying in Greece, visited Egypt, Constantinople, Brusa, Vienna, and Buda Pest. In 1902 he published the decorative painted plaster from Knossos, which was reproduced in the R.I.B.A. JOURNAL and subsequently, in the *Architectural Review*, the important Byzantine Church of St. Titus at Gortyna in Crete. He also contributed the drawings and architectural description of the Isopata Tomb at Knossos, published by Sir Arthur Evans in *Archæologia*, in 1906, and many plans and drawings for the same author's *Palace of Minos*, published last year. For many years he was one of the editors of the *Architectural Association Sketch Book*. He has also served several times on the Literature Standing Committee of the R.I.B.A., was for some time on the Committee of the British School at Athens, and is a member of the Council of the Hellenic Society. He has been Lecturer on Greek and Roman architecture at the Architectural Association Schools, an external examiner to the Civil Service Commission for posts under the Ancient Monuments Board, and has acted from time to time as technical adviser to the Treasury Selection Board for the grading of civil servants. Last year he was appointed by the Committee for Classical Archaeology at Oxford to a special lectureship for that year on Greek and Roman architecture. Mr. Fyfe was a pupil of Sir John Burnet, whom he assisted from 1904 to 1914 on the British Museum extension and other works, subsequently becoming a partner for a short period. During the greater part of the war he was Resident Architect for the Ministry of Munitions under Mr. Raymond Unwin at Queensferry, near Chester, and supervised the erection of the Mancot housing scheme. In 1919 he acted as architect to the London Housing Board under the Ministry of Health. His principal executed works are the Shaftesbury Institute Lodging Home for Working Women and Superintendent's house, in Lisson Grove, erected in 1908, farm buildings and cottages in Denbighshire, and war memorials at Youlbury, near Oxford, at Chester Cathedral, and at Blockley, Worcestershire.

He is architect to the Dean and Chapter of Chester Cathedral, and is engaged on the repair and reconstitution of the ancient Refectory there. In conjunction with Professor Abercrombie he is also engaged on the Regional Planning for the South Dee-side area, near Chester, for a joint committee of local authorities, convened by the Ministry of Health.

CAMBRIDGE ARCHITECTS' CLUB.

The Cambridge Architects' Club, consisting of architects who have been at the University, met at Cambridge on Saturday, 24 June. A reception by the Board of Studies was held at the School, 75 Trumpington Street, in the afternoon, which was attended by members of the University. The Rev. Dr. Cranage, Hon. A.R.I.B.A., as acting Chairman of the Board, presided, and addresses were given by Sir Charles Walston, Professor Beresford Pite, Mr. E. Bullough, Secretary of the Board of Studies, and Mr. Maurice Webb. In the evening the Club was entertained at dinner by the Master and Fellows of Caius College, the Vice-Chancellor and the Masters of Emmanuel and Christ's College being among the guests.

An exhibition of the works of the students, including surveys of portions of the colleges, was held at the School.

Obituary

LACY W. RIDGE [F.].

As a senior surviving member of "The Goths" I am writing this "In Memoriam" of one of the most highly respected and beloved members of our profession, the late Lacy William Ridge, with whom I first became acquainted in the year 1869, when he was President of the A.A. It is fortunate for me in doing so that I have before me a copy of "Notes on my Life," by Lacy William Ridge, 1919, which he sent me at Christmas in that year and which bears as headlines:

Reviewing life's eventful page,
And noting ere they fade away
The little lines of yesterday.

Lacy William Ridge was born on 31 July 1839, in Westminster, and was baptised at St. Margaret's. His progenitors for many generations were Sussex folk, who called him into that county, "where the grace and admirable proportions of Chichester Cathedral so impressed him, that unaided by external circumstances they settled his career." He was educated at Christ's Hospital at Hertford and Newgate Street.

While still a youth he measured the Priory Church at Boxgrove, the architecture of which shows in parts the more matured work of the architect of the Presbytery of Chichester, built after the fire of 1187. These drawings were published in 1864, and still remain ensamples how measured drawings should be prepared to illustrate the art and science of our native work, which seems to have gone into disusage since the perfecting of photography has discouraged the enthusiasm and knowledge acquired by measuring our magnificent Gothic buildings, which is our national and natural style to develop from. This neglect has led the architect of the present day to abandon all attempts at originality and content himself with endeavours to make tasteful arrangements of the dry bones supplied by the works of Vitruvius, Palladio, Piranesi, Gibbs, Chambers, and other authors. This was greatly deplored by Lacy William Ridge, who, with many others could not find sunshine enough to warrant the use of Classical Renaissance above latitude 50 degrees north. After serving his articles, he acted as an assistant in the offices of several London architects. When with Mr. Philip Charles Hardwick he prepared the more important part of the drawings for the new Charterhouse School at Godalming. In 1871 Lacy W. Ridge was appointed Surveyor under the Ecclesiastical Delapidations Act for the Diocese of Chichester, which appointment he held for 45 years, resigning it in consequence of failing eyesight in July 1917. The boundaries of this diocese are coterminous with those of the county of Sussex. During that period he inspected all the parsonages and glebes, except two, in the diocese. He also designed, remodelled, and restored many churches, parsonages, parish halls and schools, throughout the diocese. He erected similar buildings in London and elsewhere, and designed two of the first series of schools for the London School Board. With his many activities, he was Honorary Secretary for 46 years of the Ecclesiastical Surveyors' Association.

Amongst his principal works may be mentioned:

Churches: Durrington Church, Burgess Hill (St. Andrew's), Brighton (St. Matthias), Brighton (St. Alban's), Turners Hill, Withyham. Vicarages: Durrington, Turners Hill, Cowfield, East Grinstead, Bodiam Rectory, South Bersted. Almshouses: Forest Row. Schools: East Preston, Hove, Chichester, Islington. Private Houses: Purley, Chalfont St. Giles, Totteridge.

His name is to be found amongst the first six who passed the voluntary examination of the Royal Institute of British Architects. He served some time on the Council and for a long time was one of the Examiners and also Chairman of the Board for passing candidates for the District Surveyorship in London.

The interest that he took in the Architectural Association is a pleasant recollection to all those who knew him as President in 1869. His noble and inspiring character, his enthusiastic encouragement and kindly advice and assistance, which he was ever ready to give to those younger than himself, gave him great influence with the students, which enabled him to assist Col. Edis in the formation from the Association of a company of the Artist's Volunteer Corps. For 25 years he served in the regiment and retired with the honorary rank of Lieutenant Colonel.

In 1901, upon the death of his old friend Henry Cowell Boyes, he joined his partner, W. Charles Waymouth, with whom he carried on the practice until 1911, when he retired to Worthing to continue his diocesan work only.

In the year 1900 he became a Councillor of the Borough of Holborn. In 1906 he was elected an Alderman, and in 1907 he was unanimously elected Mayor. During his year of office he received the French President Fallières and the German Emperor William II, who gave him the Order of the Red Eagle with the Patent attached thereto. The Order the recipient returned to the donor in 1914 on the declaration of war.

Lacy W. Ridge was a bachelor who devoted an unselfish life to his widowed mother and family, his friends, his duty, and his profession. He died at Worthing on 8 May 1922, aged 82, and is buried in Chichester churchyard. At his own request the cortège halted before some of his works which were passed on the way to his grave, and in some cases his remains were saluted by the children of the schools he had designed. "Multis ille bonis flebilis occidit."

CHAS. FITZROY DOLL [F.].

BUILDING TENDERS AND QUANTITIES.

The Council of the R.I.B.A. wish to call the attention of members to the understanding reached with the London Master Builders' Association and the National Federation of Building Trades' Employers in 1909, when a notice was published in the R.I.B.A. JOURNAL (22 January 1910) recommending members of the Royal Institute to have quantities prepared for all ordinary works above £500 in value.

Owing to the increase in the cost of building this amount has since been increased by the Builders' Organisations to £1,000, and members of the Royal Institute are now recommended by the Council to have quantities prepared for all ordinary works above £1,000 in value when asking builders to tender.

State-Aided Housing

FEES PAYABLE TO ARCHITECTS IN CONNECTION WITH ABANDONED SCHEMES.

It will be recollected that on the issue by the Ministry of Health of General Housing Memoranda 51 and 52, the profession generally felt that the extent of the services rendered by them to their clients—and through their clients to the State—had not been fully understood or appreciated, and the scale of payment therein set forth was considered to be inadequate. The members of the R.I.B.A. thereupon elected representatives to reopen negotiations with the Ministry for the purpose of revising the terms of these Memoranda; giving to its representatives full powers to conclude an agreement on their behalf.

Prolonged negotiations between the Ministry of Health and the Members of the Royal Institute of British Architects revealed difficulties on both sides, but have resulted in an agreement being reached on the question of payment to architects for work upon schemes which have been wholly or partially abandoned.

In their consideration of the many cases of hardship submitted to them the representatives of the R.I.B.A. were impressed by the unequal application of any flat rate scale of payment to partially and wholly abandoned schemes and to large and small schemes.

In the revised terms effect has been given by the Ministry to the claim that the fees for partially abandoned schemes should be more equitably apportioned in relation to the amount of the scheme which has been carried out, a more generous proportion being paid to those who have had very little work executed. Also a new scale of payment has been adopted giving still more favourable consideration to those architects whose schemes have been entirely abandoned as compared with those who have carried into execution a fair proportion of the work originally placed in their hands.

These terms and conditions are set out in a new memorandum to be issued by the Ministry known as General Housing Memorandum No. 61.

The main points in which this Memorandum differs from our supplements G.H.M. No. 52 may be briefly summarized as follows:—

(a) Whereas G.H.M. No. 52 only provided for charging to the Housing Assisted Scheme Account fees for schemes which were approved by the Minister, in G.H.M. No. 61 provision is made for the consideration of schemes not so approved.

(b) In regard to work on roads and sewers the fees have been more accurately apportioned to the stages which the work had reached when it was abandoned.

(c) Average prices per house have been agreed as the basis on which fees for abandoned work should be calculated in respect of plans which were prepared before July 1921 and subsequently.

(d) In partially abandoned schemes instead of half the fees for totally abandoned work being paid in all cases, the fraction payable is related to the proportion of the scheme carried out.

(e) A more generous scale of payment has been adopted where the whole of an architect's work has been abandoned, and it has been provided that the R.I.B.A. will act as a Board of Reference in deciding certain points in this connection.

(f) It is provided that the local authority shall be satisfied as to the respective stages of the work carried out, and the appropriate fees.

(g) The settlement does not supersede cases where an agreement providing specifically for abandoned work has been made between the architects and the local authority, their clients, or where a final settlement has already been arrived at.

(h) The term "scheme" used in G.H.M. No. 52 has been more favourably interpreted in relation to abandoned work in G.H.M. No. 61.

(i) Travelling expenses have been provided for in G.H.M. No. 61 on a more reasonable scale.

(j) Under G.H.M. No. 61 payment may be made in certain cases for the preparation of additional copies of drawings and specifications.

(k) The Ministry are requesting local authorities to expedite the settlement of accounts with architects.

It is satisfactory to note that by the reopening of negotiations terms have been agreed which will result in a greater appreciation of the services rendered by the profession, and a scale of remuneration more in accordance with its labours.

It is desired to place on record appreciation of the manner in which our deputation was received by the Ministry and the sympathetic consideration given by the Ministry to the case presented by the deputation.

The Institute are not inclined to think that the association of architects and local authorities in connection with municipal housing schemes is at an end. They believe that in many cases local authorities will proceed with their schemes on their own account, and that architects will resume their work on these schemes.

For the guidance of members examples of the application of the revised scales have been worked out in conjunction with the Ministry; copies of those examples showing the manner in which the fees are calculated, also the average cost of houses in the months subsequent to July 1921 will be supplied on application to the R.I.B.A.

Signed HERRERT T. BUCKLAND.
FRANCIS JONES.
HERBERT A. WELCH.

JOURNAL OF THE ROYAL INSTITUTE OF BRITISH ARCHITECTS

STATUTORY REGISTRATION OF ARCHITECTS.

The Council of the Royal Institute of British Architects have appointed a Committee for the purpose of drafting a Bill for the Statutory Registration of Architects, and a Committee for the purpose of revising the Charter and By-laws of the R.I.B.A., and have directed that a notification of the fact should be communicated to the public press. The Registration Committee will begin its work immediately in the hope of being able to submit the Bill to Parliament in November.

UNIFICATION AND REGISTRATION.

The Council of the R.I.B.A., at their meeting on 3 July 1922, passed the following Resolutions:—

1. That this Council considers the scheme of the Unification and Registration Committee is contrary to the best interests of the Public, of Architectural Education and Practice, and the Royal Institute of British Architects in particular, and is of the opinion that the Committee should be dissolved.

2. That each Member of the Unification and Registration Committee be thanked for his services, and his appointment cancelled.

3. That a Committee be appointed of Members of the R.I.B.A., with power to add to their number and to co-opt, if necessary, non-Members of the R.I.B.A., and to obtain expert advice, to draft a Registration Bill with a view to its being deposited in November 1922.

4. That a small Committee be formed to consider the revision of the Charter and By-laws, and to report to the Council at the earliest possible date. The Committee to have power to add to their number and to take expert advice. The new Charter to provide for equal voting powers for all corporate Members, etc., etc. A note to be inserted in the JOURNAL asking Members to send any suggestions to the Committee.

VISIT TO GREENWICH HOSPITAL AND THE ROYAL NAVAL COLLEGE, GREENWICH.

With the permission of the Director of Greenwich Hospital, the Art Standing Committee of the R.I.B.A. have arranged a visit to the Hospital on Saturday, 22 July.

Members and their friends who intend to take part should arrange to be at the tram stop, King William Street, Greenwich, at 3 p.m., on the date mentioned, where they will be met by Mr. T. C. Agutter, F.R.I.B.A., on behalf of the Hospital Authorities.

An interesting programme has been arranged as follows:

Enter the Royal Naval College at the South Gate.

Visit to the Queen's House at about 4.30 p.m., where the visitors will be received by Captain E. M. C. Cooper-Key, R.N., C.B., M.V.O., Superintendent of the Royal Hospital School.

Tea in Greenwich Park.

Visit to the Ranger's House.

Those intending to take part should notify the Secretary R.I.B.A., as soon as possible.

CONDITIONS OF CONTRACT.

The negotiations between the Royal Institute of British Architects, the Surveyors' Institution, the Society of Architects, the National Federation of Building Trades' Employers, and the Institute of Builders, which have been proceeding for some time with a view to the preparation of a Standard Form of Contract for building operations, have reached their final stage.

A Conference of representatives from the above bodies have appointed a Drafting Committee which is already at work on the Contract Document. All matters on which the parties fail to reach an agreement will be referred to arbitration by a Tribunal of Appeal, consisting of one representative each of the Builders and the Architects, under the Chairmanship of Sir William Mackenzie, K.C., President of the Industrial Court. Sir William is well known as an Arbitrator in industrial disputes, and the acquisition of his services is of the greatest importance to the interests concerned. His appointment was made with the consent of the Ministry of Labour.

The expenses of the preparation of the Standard Form of Contract will be borne jointly by the parties interested, and the Council of the R.I.B.A. have voted a sum of £200 for this purpose.

It is hoped that the five spending Departments of H.M. Government will accept the invitation extended to them to appoint representatives to assist the Drafting Committee.

CONSULTING ARCHITECTS AND "PANEL" ARCHITECTS.

The Council of the Royal Institute desire to draw the attention of members to the principles which should govern relations between the "consulting architect" and "executant" or "panel" architects.

In a few localities where this method has been adopted so as to ensure the division of work amongst a number of architects, there have been cases, of which the R.I.B.A. has found it necessary to take cognisance, where relations between the consulting architect and the panel have left much to be desired.

The position of a consulting architect to a large housing scheme is one, not only of authority, but of honour. His duties, beyond those of a purely professional and technical nature, should lead him to secure fair and equal treatment for those who work under his supervision, rather than to obtain benefits for himself, and thereby to infringe the spirit if not the letter of the terms of his appointment.

REVISION OF THE CHARTER AND BY-LAWS.

A Committee has been formed for the purpose of considering the revision of the Charter and By-Laws. Members who have any suggestions to make on the subject are requested to send them as soon as possible to the Secretary for submission to the Committee.

THE ROME SCHOLARSHIP IN ARCHITECTURE, 1922

On the recommendation of the Faculty of Architecture of the British School at Rome, the Commissioners of 1851 have awarded the Rome Scholarship in Architecture for 1922 to Mr. Stephen Welsh, A.R.I.B.A., and on the recommendation of the same body the Henry Jarvis Studentship, offered by the Royal Institute of British Architects, has been awarded to Mr. George Checkley, A.R.I.B.A.

Mr. Stephen Welsh is a student of the University of Liverpool. He is 30 years of age and was born at Forfar, where he served his articles. He afterwards acted as architect's assistant in Glasgow for two and a half years, during which time he attended the Glasgow School of Architecture. He served during the war for over four years with the Royal Engineers.

Mr. George Checkley is 27 years of age, and was born at Akaroa, New Zealand. He is also a student of the University of Liverpool, which he entered with a New Zealand Government scholarship after serving for three and a half years with the New Zealand Expeditionary Force.

The Rome and Jarvis Scholarships are of the value of £250 a year, and tenable at the British School at Rome for a period of three and two years respectively. Both awards were open to British subjects under 30 years of age, with an allowance for war service.

The Jarvis Studentship is offered to the student or associate of the R.I.B.A. who passes next in order of merit to the winner of the Rome Scholarship.

The competition, which is conducted by the Faculty of Architecture of the British School at Rome, was in two stages.

The results of the preliminary competition were exhibited at the Royal Academy in February last at the annual exhibition of the British School. Nine of the competitors in the preliminary round were selected for the final stage, which lasted for a period of ten weeks, and was preceded by a 36 hours "en loge" test, the subject of the competition being a design for a Royal Academy. The winning designs, together with those of the unsuccessful finalists, will be publicly exhibited for a fortnight at the R.I.B.A. as from 17 July.

It is interesting to observe that the Jarvis Studentship has been awarded in two successive years to New Zealanders, Mr. E. W. Armstrong of Auckland being the winner of the Jarvis in 1921.

HENRY JARVIS TRAVELLING STUDENTSHIP.

The Faculty of Architecture of the British School at Rome have decided that, subject to the approval of the Faculty, the Henry Jarvis Student will be allowed to spend six months of his second year away from the School in any part of the Mediterranean Basin, it being understood that scholars are allowed under present conditions to travel, during the first and second year, for short periods in Italy and Greece.

Competitions

AMERICAN INTERNATIONAL COMPETITION

NEW BUILDING FOR THE *Chicago Tribune*

The *Chicago Tribune*, which was founded on 10 June 1847, proposes, in commemoration of its seventy-fifth anniversary, to erect a new home. Seeking the best possible design, the *Chicago Tribune* offers one hundred thousand dollars in prizes to architects.

The contest will be open and international.

Each competitor will be required to submit drawings showing west and south elevations and perspective from the south-west, but no detailed plans of specifications need be made. Applications for entry must be filed before 1 August 1922. Drawings must be submitted between then and 1 November 1922. Architects desiring complete information and applications for entry should write at once to Colonel R. R. McCormick and Captain Patterson, editors and publishers of the *Chicago Tribune* at the office of the *Chicago Tribune's European Edition*, 5 rue Lamartine, Paris, France.

From *The Times*, 4 July 1922.

This Competition will be conducted under the Rules of the American Institute of Architects.

SOUTHEND PROPOSED SECONDARY SCHOOL.

At the request of the Competitions Committee of the R.I.B.A., the drawings required in the above competition will be to a scale of 16 feet to the inch.

RAMSGATE LAY-OUT COMPETITION.

The President of the Royal Institute of British Architects has nominated Professor S. D. Adshead, F.R.I.B.A., as Assessor in this Competition.

IAN MACALISTER,
Secretary.

COMPETITIONS OPEN.

Southend-on-Sea Secondary School.
Lytham Public Hall and Baths.

The conditions and other documents relating to the above competitions may be consulted in the Library.

ASSISTANT ARCHITECT FOR WORKS DEPARTMENT OF THE CHINESE CUSTOMS SERVICE AT SHANGHAI.

Candidates should be Associates of the Royal Institute of British Architects, about 28 years of age, unmarried, and with a good knowledge of reinforced concrete design and construction, and with some responsible work to their credit.

The terms offered are :—Salary, Hk. Tls. 350 a month, increasing by Hk. Tls. 50 a month for every two years' service in China to a maximum of Hk. Tls. 560. (The Hk. Tl. may be considered to be worth normally 3s., but its present value is about 4s.) House allowance, Hk. Tls. 50 a month ; personal allowance, Hk. Tls. 3 a day, when away from headquarters, and free medical attendance. First-class passage paid and £50 travelling expenses.

Applications, in the first instance, should be made to the Secretary, R.I.B.A.

Final Examinations

ALTERNATIVE PROBLEMS IN DESIGN

Instructions to Candidates.

1. The drawings, which should preferably be on uniform sheets of paper of not less than Imperial size, must be sent to the Secretary of the Board of Architectural Education, Royal Institute of British Architects, 9 Conduit Street, W., on or before the dates specified below.

2. Each set of drawings must be signed by the author, AND HIS FULL NAME AND ADDRESS, and the name of the school, if any, in which the drawings have been prepared, must be attached thereto.

3. All designs, whether done in a school or not, must be accompanied by a declaration from the Student that the design is his own work and that the drawings have been wholly executed by him. In the preparation of the design the Student may profit by advice.

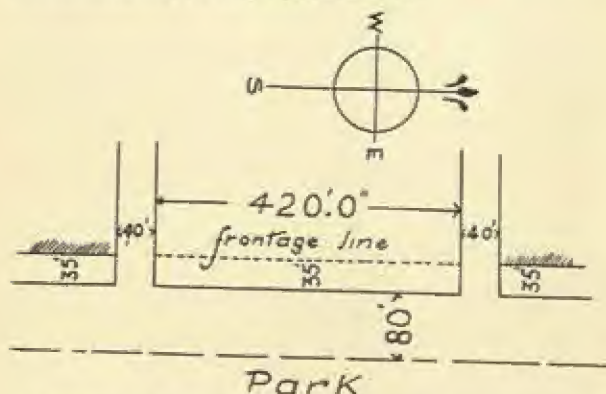
4. Drawings for subjects (a) are to have the shadows projected at an angle of 45° in line, monochrome, or colour. Drawings in subjects (b) are to be finished as working drawings. Lettering on all drawings must be of a clear, scholarly, and unaffected character.

Subject LXIV.

(a) A CHURCH, adjacent to or in a town, upon a corner site, 150 feet by 100 feet, the junction of the roads being at the S.E. corner, for a congregation of 600. The cost is to be upon a reasonably economical scale.

Drawings: $\frac{1}{2}$ -inch scale. Ground plan. South, East and West elevations. Longitudinal and cross sections.

(b) A speculative builder has purchased a plot of land, and proposes to build thereon a row of 15 HOUSES—looking East to front a park. The terrace to be built of brick, but stone embellishments may be employed, if desired.



Drawings: Block plan, $\frac{1}{2}$ -inch scale. East elevation, $\frac{1}{8}$ -inch scale; and plans, sections and elevation of one house to $\frac{1}{2}$ -inch scale.

Subject LXV.

(a) The formal treatment of the GARDEN OF A PUBLIC SQUARE in a town, having a statue, memorial shelter, or a fountain, or such features in combination, in the centre.

Plan the garden and design the enclosure and other features. The area of the enclosure is to be 15,000 feet. The shape is optional.

Drawings: Plan, $\frac{1}{2}$ -inch scale. Architectural features, $\frac{1}{2}$ -inch scale. Details of stone and ironwork, $\frac{1}{8}$ -inch scale.

(b) Water is raised from a deep well—to a tank overhead—the underside to be 30 feet above ground level—the tank to

hold 3,000 gallons. Access to tank to be gained by a staircase, and there is to be an indicator to show the level of the water in it. The water is to be raised by an engine (internal combustion) which is also used to generate the electricity for lighting the house, near by. Required a BUILDING, OVER THE WELL, TO CARRY THE TANK, house the engine and pump apparatus—provide a switchboard, accommodation for 30 accumulator cells, and space for a small carpenter's bench. Materials, brick walls, tiled roofs.

Drawings: Elevations and section to $\frac{1}{2}$ -inch scale.

Subject LXVI.

(a) A design for the FAÇADE OF A TRAM DEPOT on a highway, the depot to admit six trams.

Drawings: $\frac{1}{2}$ -inch elevations; $\frac{1}{2}$ -inch detail.

(b) Submit a design on an open site of one acre for a £5,000 COUNTRY HOUSE. The sections to show constructional detail.

Drawings: $\frac{1}{2}$ -inch scale plans, elevation and sections; $\frac{1}{2}$ -inch scale portion of exterior; $\frac{1}{2}$ -inch block plan.

Dates for Submission of Designs in 1922-23.

	Subj. LVIII.	Subj. LIX.	Subj. LX.
United Kingdom	31st Aug.	31st Oct.	30th Dec.
Johannesburg	31st Oct.	30th Dec.	28th Feb.
Melbourne	30th Nov.	31st Jan.	31st Mar.
Sydney	30th Nov.	31st Jan.	31st Mar.
Toronto	30th Sept.	30th Nov.	31st Jan.

The Problems in Design submitted by candidates for the Final Examination and the Special War Examination will be on exhibition in the galleries of the R.I.B.A. from Friday, 14 July, to Friday, 21 July, between the hours of 10 a.m. and 5 p.m.

EVERARD J. HAYNES,
Secretary, Board of Architectural
Education.

VACANCIES FOR ARCHITECTS IN AMERICA.

Pittsburgh Chapter,
The American Institute of Architects,
Pittsburgh, Pa.
27 May 1922.

To the Editor, JOURNAL R.I.B.A.,—

DEAR SIR,—There is at present in our town a shortage of able and well trained architects, assistants, draughtsmen, and even apprentices. So far as this goes, the same thing applies, I think, to most other American cities.

This office is in need of men to serve as draughtsmen and assistants. This is written with the idea that you might refer this letter to the proper organisation or individuals in England that might be interested.

If such should be the case we would like to enter into details regarding wages, transportation expense, if necessary, and length of service required to obtain from England the help which we need. There are in this city a number of good men who have come from England and Scotland by their own choice. We like them, and could at this time place more.

The idea is somewhat novel and might be difficult to work out, but we can at least make the effort. Thanking you for the courtesy of your attention.—I am, yours very truly,

EDWARD B. LEE, President.

JOURNAL OF THE ROYAL INSTITUTE OF BRITISH ARCHITECTS

Examinations

PROBATIONERS, R.I.B.A.

Since 1 March 1922 the following have been registered as Probationers of the Royal Institute:—

ABRAMS : EDWARD DE LA TOUR, Hutton Mount, Brassey Road, Limpsfield, Surrey.
 ALEXANDER : WALTER, 74 Survey Road, Quetta, Baluchistan, India.
 AMY : HEDLEY JAMES YOLE, 29 East Street, South Molton, Devon.
 ATHERTON : STANLEY, The Firs, Madeira Road, West Byfleet, Surrey.
 BAINES : HERBERT, 119 Waterbarn Street, Burnley, Lancs.
 BARCLAY : ROGER FRANCIS, Somerleyton, Overton Road, Sutton, Surrey.
 BARNETT : HAROLD SAMSON, 43 Stockwood Crescent, Luton, Beds.
 BEDINGFIELD : ERIC EDWARD, Bitteswell Road, Lutterworth.
 BENJANS : FREDERICK JOHN WILLIAM, 124 Hanover Road, Willesden, N.W.10.
 BENNETT : WALTER ROBERT FRANCIS, "Brightside," Grove Road, Havant, Hants.
 BIRD : HENRY CLEMENT EDMUND, 518 Warwick Road, Sparkhill, Birmingham.
 BIRKETT : PHILIP WALTER, Brier Lea, Carline Road, Lincoln.
 BOOTH : STANLEY CYRIL, 47 Southchurch Road, Southend-on-Sea.
 BOWN : STANLEY HINKS, Pitway House, Farrington Gurney, near Bristol.
 BRADLEY : FRANK, Sunnybank, Junction Road, Deane, Bolton, Lancs.
 BROWN : ROBERT NEVILLE, Aubrey House, Harton, South Shields.
 CARLTON : HERBERT, 8 St. Andrew's View, Penrith.
 CARTER : PETER GEORGE JEFFERY, 37 Hamilton Road, Reading.
 CAWSE : STANLEY VICTOR, 15 Dyne Road, Kilburn, N.W.6.
 CHANDLER : FREDERICK, "Somerville," Lansdowne Road, Luton, Beds.
 CHIPPINDALE : FRANK, 10 Ash Grove, Otley, Yorks.
 CLAYDON : BERNARD, 641 St. Helens Road, Bolton, Lancs.
 CLEMENTSON : JOHN GEORGE, 69 Westminster Street, Bensham, Gateshead-on-Tyne.
 CLOKE : SAMUEL DOUGLAS NEIGHBOUR, 19 Whiteford Road, Mannamend, Plymouth.
 COLLINS : TOM ANDERSON, 2 Bancroft Road, Hale, near Altrincham, Cheshire.
 COOPER : ARTHUR FRANK, 53 Telephone Road, Southsea.
 CORNFORD : ROGER HENLEY COPE, 3 Melina Place, St. John's Wood, N.W.8.
 DARRA : HENRY, 19 Camden Gardens, Shepherd's Bush, W.12.
 DOLMAN : FRANK LIONEL JAMES, Crest House, Putney Bridge Road, Putney, S.W.15.
 EVANS : CHARLES HERBERT, 106 Monthermer Road, Roath Park, Cardiff.
 FARMER : GEOFFREY JOHN, "Westside," Portbury, Somerset.
 FERRIBY : EDWARD ASHTON, 80 Westbourne Avenue, Hull.
 FILLMORE : CECIL ERNEST, Newhaven, Hollyhedge Road, West Bromwich.
 GADD : GEORGE CYRIL, Redlands, Bromsgrove, Worcs.
 GARDNER : ALFRED HERBERT, 5 Albany Road, Coventry.
 GODDARD : ALEC NORRIS, 123 Dalyell Road, Stockwell, S.W.9.
 GOUGH : GERALD CHARLES PURCELL, "Sunny Mead," Lands Road, Paignton, Devon.
 HARLING : GEORGE, 26 Rosegrove Lane, Burnley, Lancs.
 HARRIS : EDWARD RICHARD BINGHAM, 17 St. Stephen's Road, Ealing, W.13.
 HARWOOD : WILLIAM JOSEPH, 61 Cemetery Road, Southport.
 HAYSON : ERNEST WILLIAM, 13 Forbury Road, Portsmouth.

HOLMAN : JOHN, "Ryde Cot," Blandford Road, Beckenham, Kent.
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 HOWARD : GEORGE GERARD, 12 Rockdove Gardens, Tollcross, Glasgow.
 HUGHES : ROGER WILLIAM, Ivy Cottage, Petersham, Surrey.
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 KEMP : WILLIAM CHARLES, 2A Portnall Road, Harrow Road, W.9.
 KENDRICK : ALBERT WILLIAM ROYAL, 79 Wendell Road, Shepherd's Bush, W.12.
 KERSHAW : SIDNEY, 168 Turton Road, Bradshaw, near Bolton, Lancs.
 KING : BERNARD JOHN, 34 Selsey Road, Edgbaston, Birmingham.
 KNIGHT : HENRY RONALD EWART, The Mount, Grand Parade, Leigh-on-Sea.
 LOCKWOOD : HAROLD, 25 Ashley Road, Shipley, Yorks.
 MCMORRAN : DONALD HANKS, 34 Butler Avenue, Harrow-on-the-Hill.
 MCNAIR : ROBERT, c/o David, 33, West Cumberland Street, Glasgow.
 MAGNONT : ARTHUR, 64 Wormholt Road, Shepherd's Bush, W.12.
 MEAD : ARTHUR GEORGE, The Bungalow, Oakington Avenue, Wembley Park, Middlesex.
 NARBOROUGH : GERALD MICHAEL, 40 Mile End Road, Norwich.
 OLIVER : LEWIS MARTIN, Shots Mead, Walton-on-Hill, Tadworth, Surrey.
 PATERSON : ANDREW SMITH, 12 Pitcullen Terrace, Perth, Scotland.
 PEARCE : LIONEL (JUNR.), Amblecote, Stourbridge, Staffs.
 RIGG : MARY FREDA, The Lawn, Waterloo, Hants.
 ROBERTS : ARTHUR HENRY, 22 Quarry Road, Wandsworth Common, S.W.18.
 ROBINSON : GEORGE SUTHERLAND, 6 Highfield Avenue, Grimsby.
 RULE : WILLIAM CECIL, 13 Coronation Terrace, Truro, Cornwall.
 RUNDALL : EDWARD AUGUSTUS, West Laith Gate, Doncaster.
 SARTAIN : SIDNEY PHILIP, 15 Wandsworth Bridge Road, Fulham, S.W.6.
 SAUNDERS : GEORGE SLEITH, 16 Leopold Terrace, Chapeltown Road, Leeds.
 SCHOFIELD : JAMES ARTHUR, 31 Kendall Road, Beckenham.
 SHAW : SYDNEY ALBERT, 13 Church Road, Hoylake, Cheshire.
 SHAW : THOMAS REGINALD, 47 Rider Road, Hyde Park, Leeds.
 SHORE : ROBERT COLLIER, 48, Sheriff Street, Rochdale.
 SHROFF : PHIROZE DARABSHAW, Patel Mansions, Gowalia Tank Road, Cumballa Hill, Bombay, India.
 SILCOCK : HUBERT SPENCER, Brandhoek, Walton New Road, Stockton Heath, Warrington.
 STEWART : STANLEY, 18 Batchorgate, Carlisle.
 SUTHERLAND : ROBERT OAKMAN, c/o J. H. Brewerton, Gervie Chambers, The Square, Bournemouth.
 TIMMINS : SAMUEL DENNIS, Elmhurst, Stafford Road, Bloxwich, near Walsall.
 WARREN : LESLIE BEAL, c/o Arthur Edwards, Esq., 9 Bennett's Hill, Birmingham.
 WEBSTER : HERBERT, 4 Hirst Street, Padiham, Lancs.
 WINTLE : ARTHUR EDWARD, 20 Kensington Crescent, W.14.
 WORRICKER : JOHN WILLIAM, 14 Macfarlane Road, Shepherd's Bush, W.12.
 WRIGHT : GERALD RYBY HALL, 7 Willow Grove, Beverley, E. Yorks.
 WRIGHT : WILFRID GEORGE, 60 Haddenham Road, Narborough Road, Leicester.
 WYKES : HERBERT TOM, 57 Ffordd Estyn, Garden Village, near Wrexham, N. Wales.

Members' Column

Members, Licentiates, and Students may insert announcements and make known their requirements in this column without charge. Communications must be addressed to the Editor, and be accompanied by the full name and address. Where anonymity is desired, box numbers will be given and answers forwarded.

CHANGE OF ADDRESS.

CAPTAIN ALAN L. BELCHER, R.E., Licent., has changed his address to 8 Southampton Street, Bloomsbury Square, W.C.1.

MESSRS. ARTHUR W. COOKSEY AND PARTNERS.

The practice of the late Mr. Arthur W. Cooksey [F.], of 6, Adam Street, Adelphi, W.C., is being carried on at the same address by his son, Mr. R. A. Cooksey [A.], in conjunction with Mr. A. H. Hasnup, under the style of Arthur W. Cooksey and Partners.

MR. W. HERBERT ALTON.

Mr. W. Herbert Alton, L.R.I.B.A., of 24 Dickson Road, Well Hall, Eltham, has opened a London office at 32 Charing Cross, Whitehall, S.W.

MR. CHARLES W. BOWLES.

Mr. Charles W. Bowles, F.R.I.B.A., is resuming practice at 28 Austin Friars, E.C.2.

ROOM WANTED.

ARCHITECT, F.R.I.B.A., wishes to have the sole use of a room in West End office at moderate rent. Please send full particulars to Box 943, c/o Secretary R.I.B.A., 9 Conduit Street, W.

PARTNERSHIP.

ARCHITECT with 30 years' varied experience, artistic and first rate designer, desires working partnership with another wishing to extend practice or desiring gradual retirement.—Apply Box 223, c/o Secretary R.I.B.A., 9 Conduit Street, London, W.1.

A.R.I.B.A., young, energetic, wishes partnership or working arrangement with good provincial firm (London district preferred). Good experience in domestic, school, shop, hospital work, etc. Used to responsibility. Small capital.—Apply Box 2862, c/o Secretary R.I.B.A., 9 Conduit Street, London, W.1.

ARCHITECT, F.S.Arc., A.M.T.P.I., M.R.San.I., requires partnership in well established firm of architects, or would entertain joining another architect as a partner; able to introduce a certain amount of capital if necessary; advertiser reserves right of making fullest investigations into any applications he may receive.—Address in strict confidence, giving full particulars as to practice and amount of capital required (if any), to Box 7722, c/o The Secretary R.I.B.A., 9 Conduit Street, W.1.

LICENTIAE, 30 years' experience, desires partnership. School, Church, Domestic, Survey and Estate work, etc.—Apply Box 1372, c/o The Secretary R.I.B.A., 9 Conduit Street, W.1.

APPOINTMENTS VACANT.

OPENING for an architect as journalist on building and engineering trade papers in Australia. Salary £6 ros. per week. State Qualifications in architecture, engineering and journalism (if any). Engagement to commence from November.—Apply Box 433, c/o The Secretary R.I.B.A., 9 Conduit Street, W.1.

APPOINTMENTS WANTED.

LICENTIAE, R.I.B.A., desires architectural work in London, well qualified and used to responsibility, over 20 years' experience.—Apply Box 801, c/o Secretary R.I.B.A., 9 Conduit Street, W.1.

ARCHITECT'S ASSISTANT, Associate desires post in London or provinces. Ex-Serviceman. Four years "Articles" and worked with architects in London and provinces. Testimonials from same. General all-round experience and knowledge of reinforced concrete. Good draughtsman. Age 31.—Apply Box 4722, c/o The Secretary R.I.B.A., 9 Conduit Street, London, W.1.

ASSOCIATE (37), with moderate capital at present holding important public appointment desires post as senior assistant with a view to partnership in London area. Keen, competent, and good organiser. Competition successes. Ex-officer, R.E.—Apply in first instance Box No. 8722, c/o Secretary R.I.B.A., 9 Conduit Street.

STUDENT R.I.B.A., age 22, First Class Certificate London University School of Architecture, desires position as draughtsman in architect's office. Some office experience of domestic and housing work, including surveying and levelling. London preferred. Apply Box 2132, c/o Secretary, R.I.B.A., 9 Conduit Street, W.

Minutes XIX

SESSION 1921-22

At the Sixteenth General Meeting (Ordinary) of the Session 1921-22, held on Monday, 26 June 1922, at 8.30 p.m.—Mr. Paul Waterhouse, President, in the chair. The attendance book was signed by 1 Hon. Fellow, 2 Hon. Associates, 2 Hon. Corresponding Members, 39 Fellows (including 14 members of the Council), 45 Associates (including 5 members of the Council), 3 Licentiates, and a very large number of visitors.

The Minutes of the Meeting held on 12 June 1922, having been published in the JOURNAL were taken as read, confirmed, and signed by the President.

The following members, attending for the first time since their election, were formally admitted by the President: Mr. Randal Phillips, Hon. Associate; Mr. Richard Anderton, Associate; and Mr. George Bloore, Licentiate.

The President delivered an address on the presentation of the Royal Gold Medal to Mr. Thomas Hastings of New York. Having been invested with the Medal, Mr. Hastings expressed his thanks for the honour conferred upon him and delivered a brief address.

The Hon. Secretary announced the following results of the Final Examination for the Architectural Scholarships at the British School at Rome: Mr. Stephen Welsh, A.R.I.B.A., awarded the Rome Scholarship, and Mr. George Checkley, A.R.I.B.A., awarded the Henry Jarvis Studentship.

The proceedings terminated and the meeting rose at 9.15 p.m.

Minutes XX

SESSION 1921-22

At the Seventeenth General Meeting (Ordinary) of the Session 1921-22, held on Monday, 3 July 1922, at 8 p.m.—Mr. Paul Waterhouse, President, in the chair. The attendance book was signed by 18 Fellows (including 8 members of the Council), 15 Associates (including 3 members of the Council), 4 Licentiates, 2 Hon. Associates, and a large number of visitors. The Minutes of the Sixteenth Meeting, held on 26 June, having been taken as read, were confirmed and signed.

The Hon. Secretary announced the decease of the following: Mr. G. E. T. Laurence, elected Associate, 1887; Mr. Henry Higgins, elected Licentiate 1911, and, on the motion of the Hon. Secretary, it was RESOLVED that the regrets of the Institute for the loss of these members be recorded on the Minutes of the Meeting.

The following new members, attending for the first time since their election, were formally admitted by the President: Dr. Thomas Ashby, F.S.A., Hon. Associate, Director of the British School at Rome; Mr. Sydney Cockerell, M.A., Hon. Associate, Director of the Fitzwilliam Museum, Cambridge; Mr. H. T. Jackson, Associate.

Dr. Thomas Ashby, M.A., Director of the British School at Rome (Hon. Associate), having read a paper entitled "Recent Excavations at Rome," a discussion ensued, and on the motion of Commendatore R. A. Lanciani, R.G.M., H.C.M., seconded by Professor H. E. Butler, a vote of thanks was passed to Dr. Ashby by acclamation, and was briefly responded to.

The proceedings closed at 9.55 p.m.

Arrangements have been made for the supply of the R.I.B.A. JOURNAL (post free) to members of the Allied Societies who are not members of the R.I.B.A. at a specially reduced subscription of 12s. a year. Those who wish to take advantage of this arrangement are requested to send their names to the Secretary of the R.I.B.A., 9 Conduit Street, W.1.



FIG. 3—EARLIER SACRA VIA AND BASILICA OF CONSTANTINE

Recent Excavations in Rome

By THOMAS ASHBY, D.LITT. (HON. ASSOCIATE), DIRECTOR OF THE BRITISH SCHOOL AT ROME

MY pleasure in accepting your invitation to address you here to-night is increased by the fact that I appear to be the successor of Professor Lanciani, my teacher in Roman topography, to whom, in common with many other of his old pupils and friends, I shall always feel a debt of gratitude. Since he delivered his address on "Architectural Results of the Latest Excavations in the Forum," no one has spoken to you on the subject of recent discoveries in Rome, and therefore, while not desiring to confine my attention to the Forum or the Palatine, the excavations of both of which are under the direction of Commendatore Boni, I think it may be well to begin by telling the story of those excavations from the point where he left it up to the present day. The excellent restoration of the centre of Rome (*Media Pars Urbis*) by an old student of the British School at Rome, Mr. H. C. Bradshaw [*A.*], will serve to illustrate the greater part of this paper.

One of the most important results has been the confirmation which has been obtained of certain statements of our ancient authorities in regard to the early history of Rome, which had previously been doubted by hyper-critical historians. Thus we may, I think, take the Palatine as the original nucleus of Rome, even though the wall of Romulus probably never existed. The Palatine was sufficiently defended by its lofty cliffs and by the two marshy valleys which nearly surrounded it. Remains of a cemetery which began to be used about 750 B.C., that is about the date of the traditional foundation of Rome, have been found in the Forum near the Temple of Antoninus and Faustina, though this cemetery probably belonged to a somewhat enlarged community: it ceased to exist about 550 B.C., when the city of the Seven Hills came into being, and it became necessary to make use of the two marshy valleys above mentioned, which now were drained and converted respectively

into the Forum and the Circus Maximus—the civic centre and the place of recreation. Tradition ascribes to Tarquinius Priscus the construction of the Cloaca Maxima at this very date, and scanty traces of it have actually been found; it appears to have been an open channel, but several of its branches, constructed of the same material, a grey volcanic tufa, have been preserved, and may, I think, claim to be by two or three centuries the earliest Roman arches in existence (Fig. 1).

To the same period—again that to which tradition ascribes it—belongs the earliest city wall of Rome, which probably did not include the Aventine, built of the same material, the blocks used being about a foot high, and also the Temple of Jupiter Capitolinus, further remains of which have recently been brought to light, belonging entirely to the podium (Fig. 2). Of the superstructure nothing is left, and even of that of Imperial days hardly a trace has been found, but quite a new light has been thrown on the character of the terra-cotta statues which adorned the original temple, the work, according to Pliny, of Vulca, an artist of Veii, by the discovery at Veii itself of portions of a very fine group of painted terra-cotta statues, including a splendid Apollo.

The same tufa may be found in several early buildings in the Forum, notably in the original podia of the temples of Saturn and of Castor and Pollux, both of them attributed to the beginning of the fifth century B.C.; and I think it is not too much to say that we are on fairly safe ground in attributing any buildings in which we notice the use of cappellaccio, as this particular kind of tufa is called, to, roughly, 550 to 450 B.C.

Of the succeeding two centuries we know very little. In the successive reconstructions of the shrines and sanctuaries of the Republican Forum the remains of the original structures were not altogether destroyed, and thus in the pavement of the Lacus Curtius and in the shrine of Venus Cloacina we may trace a succession of different building materials, each belonging to a different reconstruction, and testifying to a gradual rise in level.

This rise in level may be strikingly exemplified in the case of the Curia. We can see the level of the original marble dado of the exterior (immediately to the left of the blocked door), then we can see the bottom of the door posts of the eleventh century building, about half way up, to the modern

threshold, which has itself been raised 2 or 3 feet since the beginning of the seventeenth century. The Curia as it stands is a reconstruction of the time of Diocletian, but it occupies the site of that of Caesar.

Other changes may be seen in the Rostra, the platform from which speakers addressed the people assembled in the Comitium. Various changes in orientation as well as in level seem to indicate that the Curia, or Senate House, originally placed by the kings on the north side of the Comitium, must also have changed its orientation more than once; but until the excavation can be extended further to the north-east it will be impossible to hope for a solution of the problems which present themselves in this connection. A break with tradition had already been made in 145 B.C., when for the first time a tribune turned his back on the Comitium to address the people in the Forum; but it was Julius Caesar who transferred the Rostra to the north-west end of the open area of the Forum, which lay between the two basilicas which had sprung up behind the two rows of *tabernae*. This change made it possible to give the Forum a proper architectural setting. On each side of the open space there was to be a magnificent basilica, the Curia was to be reconstructed, and the whole of the open area of the Forum paved; but Caesar's death cut these projects short, and it was not until Augustus returned to Rome as a victor that he was able to bring them to completion.

There was one addition to the scheme. The temple of Caesar, at the other end of the Forum proper, was raised to his memory by Augustus. The very spot on which the body of the great Dictator was burnt is included in the façade—a semi-circular niche enclosing the actual slabs on which the impromptu pyre was raised—a case unique in architecture; and in this niche, perhaps the most impressive spot in the Forum, is the base of the monument which had been erected immediately afterwards. Of the temple itself but little is preserved; the blocks of marble and stone of which it was constructed were removed in the Middle Ages, and almost nothing is left but the concrete core. It was erected on the site of the street which bounded the Forum, as Caesar had planned it, on the south-east. Parallel to this street there is a line of small rectangular pits, stone lined and covered with slabs of stone, and similar pits have been found on two of the other three sides.



RESTORATION OF THE CENTRE OF ROME (MEDIA PARS URBIS)

By H. Chilton Bradshaw [A.], Rome Scholar 1913



FIG. 1.—EARLY DRAIN NEAR THE TEMPLE OF SATURN

Three lines of similar pits run along the boundary between the Republican Comitium and the Forum, closely associated with the earlier Rostra. These pits must have had some ritual significance which is unknown to us.

In the course of the reconstruction by Augustus the open area was repaved at a level slightly higher than that of Caesar. An aerial photograph has revealed the existence of an inscription in letters a foot high, once filled up with bronze, showing that the pavement had been laid by one *L(ucius)*



FIG. 2.—ANGLE OF THE PODIUM OF THE TEMPLE OF JUPITER CAPITOLINUS

Naevius L(uci) F(ilius) Surdinus Pr(aetor). We know of a man of this name who was *triumvir monetalis* about 15 B.C., with whom he may be identified. This discovery at once led to the identification of a number of monuments of which our ancient authors speak—the site of the praetorian tribunal, the Lacus Curtius, the enclosure in which stood the statue of Marsyas and the fig, vine and olive, etc.

We have not yet spoken of the two great basilicas by which the open area of the Forum was flanked. The Basilica Julia on the south was, as we have seen, planned by Caesar and completed by Augustus. The building that now lies before us, however, is a reconstruction by Augustus himself upon a larger site. Towards the Forum it pre-



FIG. 4.—PAVEMENT OF THE REPUBLICAN ATRIUM VESTAE

sented a long series of arcades in two stories; on entering them one passed through the outer vestibule into the aisles surrounding the main hall or nave, which had a flat roof, while the aisles were vaulted. Only the foundations of the pillars are now preserved, except at the north-west end. The central hall was lighted by a clerestory, like the nave of a cathedral. At the back was a row of small rooms (*tabernae*) used as offices or shops.

The Basilica Aemilia was restored even more frequently, and the building before us, now so much ruined that it is difficult to get a general idea of it, is the building re-erected under Augustus and restored under Tiberius. It was similar in appearance to the other, except that the Doric arcade (the west end must have been standing in the fifteenth century) was a good deal more massive, as its

fragments show. As it was on the sunny side of the Forum, a row of *tabernae* was placed inside the front arcade. The fate of the building has been made clear by recent excavations. A fire, probably at the beginning of the fifth century, destroyed the interior; this is clear from the coins which have been found on the marble pavement of the nave. No attempt was made to rebuild it, but a large mediaeval house was erected in it. Three and a half centuries later came another catastrophe—the great earthquake in the time of Pope Leo IV—and this and other buildings in the Forum became a mass of ruins.

Of the temple of Caesar we have already spoken. The temple of Castor and Pollux close by it is, as we have seen, of very ancient origin, but the famous three columns and the massive stone and concrete podium on which they rest belong to another restoration, carried out by Tiberius in the time of Augustus (Fig. 3). Much of the stone has been removed by the builders of Mediaeval and Renaissance Rome, and this makes it difficult to understand the arrangements of the temple, which had small rooms between the foundations of the columns, used as offices. We know, for instance, that the weights and measures office was here, just as the Temple of Saturn served as the State Treasury. But the lofty bases of all these temples were also designed as a protection against flood. Horace's *vidimus flavum Tiberim ire deiectum monumenta regis templaque Vestae* was a reality as late as 1900.

Recent excavations have brought to light fragments of the back pediment and colonnade of the temple, and we are thus able to obtain a good idea of the beauty of the carving of the architectural members, despite the great height at which it was placed. We have no record of the existence, after the Dark Ages, of more than three columns, and we may suppose that the earthquake of Leo IV was in this case also responsible for the destruction of the temple.

Just below the temple of Castor and Pollux lies the *Lacus Juturnae*, originally a pond, later paved with slabs of tufa, in which horses could be actually watered. What we now see, a rectangular basin lined with marble with a base in the centre, is a formalisation of this. On the base there stood statues of the Twin Brethren holding their horses (supposed to be original works of Greek art of the fifth century B.C. from Southern Italy), broken into small pieces when paganism finally died out. Behind is a small chapel erected to Juturna, with a

well in front of it—(*Fons Juturnae*). The puteal, or well head, is of white marble, and dates from the early empire. In front is an altar with Juturna and her brother Turnus, familiar figures to all readers of the *Aeneid*.

Close to the well of Juturna stood, as was fitting, the round temple of Vesta. Only its foundations remain, but enough fragments have been found to give us an idea of its appearance. They date from the reconstruction by Julia Domna, the wife of Septimius Severus, as, indeed, does the House of the Vestals—generally known as the Atrium Vestae, from the large court surrounded by a portico which forms its central feature.

The oldest portions now above ground date from the time of Nero, but recent excavations have brought to light traces of the Atrium Vestae of the end of the republic, with mosaic pavements, etc., below the level of the later building (Fig. 4). The Romans did not, as we do nowadays, completely clear the site of a new building, but left the floors and walls of the building they destroyed or superseded lying often only a few inches below the new pavements; and as this process was often repeated several times we are able to gain far more information by the excavation of the site of a Roman city than would be possible supposing that modern London were to fall into ruins and be excavated two thousand years afterwards. The orientation of these earlier foundations corresponds with that of the Temple of Vesta and of the Regia, the entrances of both of which faced due east.

Nero's reconstruction of the Atrium Vestae was only a part of a grandiose building scheme which transformed the whole of the topography of this part of Rome. Before the time of Nero the Sacra Via ascended the ridge of the Velia in a slight curve, and the very paving stones on which Horace may (Fig. 5) have been strolling when he met his unfortunate friend, have been brought to light; but the erection of the Golden House after the fire of 64 A.D. involved the provision of an adequate approach to a group of buildings which, we should remember, covered an area greater than that of St. Peter's and the Vatican, including the garden. From the temple of Vesta, a huge portico, of which only the foundations remain, led up to the vestibule on the summit of the Velia. These foundations, which were identified, correctly in my judgment, by an American archaeologist, Miss Van Deman, cut through the remains of a large and important

republican house, or it may be a group of houses, of which no report has yet been published. The foundations of other buildings on the same orientation have been found under the Basilica of Constantine, and the Sacra Via was obviously laid by Nero to run in a straight line up to the entrance of the Golden House between two porticoes. The site of the Colosseum in the valley beyond was occupied by an ornamental lake, and the principal palace lay to the east of it.

The unpopularity of Nero's appropriation of such an immense extent of ground, almost in the centre of the ancient city, is clear from the eagerness displayed by his successors in restoring it to public uses. Vespasian constructed the Colosseum in the centre, Titus built baths opposite to it, but a fire in his reign appears to have rendered uninhabitable that part of the Palatine which had escaped the conflagration of Nero, and Domitian was entirely occupied in the reconstruction of the imperial palaces on that hill. It was only Trajan who found himself able to surrender the main palace of the Golden House, and to erect on its site those immense baths which had been attributed to Titus until Professor Lanciani correctly identified them in 1895; and this is why the numerous drawings of the paintings of the Golden House which have been made since the fifteenth century, when Raphael's pupils drew inspiration from them for the decoration of the Loggie of the Vatican, have always been attributed to the Baths of Titus. Finally, Hadrian erected on the site of the vestibule, the extent of which we may judge from the position of the Arch of Titus, pushed up into a corner as it is, the great double temple of Venus and Rome. The two apses lie back to back, and were surrounded by porticoes. It might be well to mention that the brickwork of the whole superstructure belongs to a reconstruction of Maxentius. We shall find when we reach the Palatine that much more may be done in the way of dating brick-faced concrete than has hitherto been attempted, and the researches of Miss Van Deman and others have thrown new light on many problems, just as the dating of entablatures will be found to have been carried a good deal further when a posthumous work by the late Fritz Tobelmann, a German archaeologist who was killed in the first month of the war, is published. It will, we may hope, no longer be possible for authorities to differ as to whether the cornices of the temples of Mars Ultor and of Castor and

Pollux are to be attributed to the reign of Augustus or that of Hadrian, or whether that of the Regia belongs to the time of Augustus, or to that of Diocletian (Fig. 6).

From the Arch of Titus a branch road, known as the Clivus Sacer, ran up to the area between the two main imperial palaces on the Palatine, following the line of the original road of approach through the primitive settlement. In the last century of the republic its vicinity to the Forum made the Palatine the favourite residence of the great men of Rome. Several houses of this period have indeed been found. To name no more, Cicero and his brother, his clients M. Aemilius Scaurus and Milo, his enemy Catiline and his opponent Hortensius all had houses on the Palatine, and there is now little doubt that the last named is preserved to us, and was, unlike the rest, never obliterated by the enormous substructions of the imperial palaces. Augustus bought the house that had belonged to Hortensius,* "remarkable" as Suetonius says, "neither for its size or its adornment; its porticoes were small and built of Alban stone, and its apartments were without any marble decoration or exquisite pavements." To it he added an atrium in which the Senate could meet, but the house itself remained a modest one; and it is to be recognised in what has hitherto been known as the house of Livia, the painted decorations of which belong to this period. We may notice that just as the "house of Romulus" and the "hut of Faustulus," the shepherd who gave him shelter, lasted on until the Christian period, so the house of the founder of the empire was respected by later rulers, who preferred to erect vast arches to support the enlargements of their buildings rather than sweep away the humble dwelling of their great predecessor.

On the site of another republican house close by (perhaps that of Antony, as Professor Richmond thinks), Augustus erected the temple which he had vowed to Apollo after the victory of Actium. No other temple than this could have been superimposed upon a house of the late republic, for all the other temples of which we have record on the Palatine belong to a much earlier period. And if we read the *Carmen Saeculare* in the light of the new theory, it gains point and force when we look from the temple steps straight across to the Aventine sacred to Diana (*quae Aventinum tenet Algi-*

* For all this see Richmond: *J. R. S.*, iv. 1914, 193.

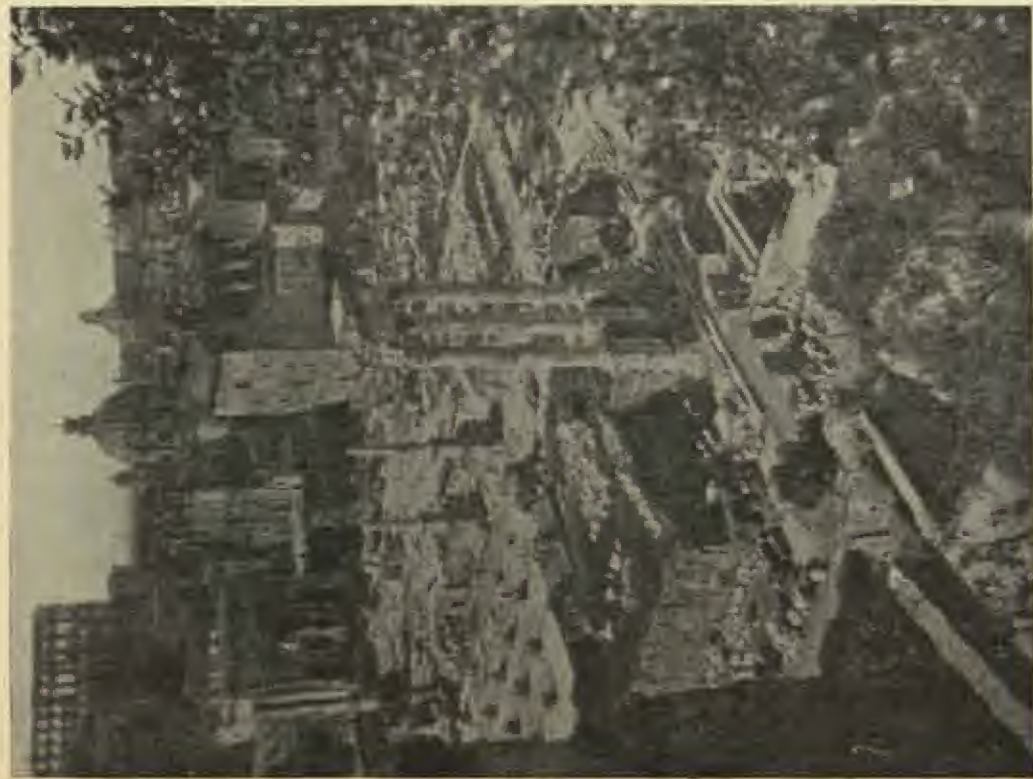


FIG. 3.—TEMPLE OF CASTOR AND POLLUX. VIEW FROM THE PALATINE



FIG. 6.—CORNICE OF THE REGIA (PERIOD OF AUGUSTUS)



FIG. 7.—PALACE OF TIBERIUS (*Lacus Juturnae* IN FOREGROUND)

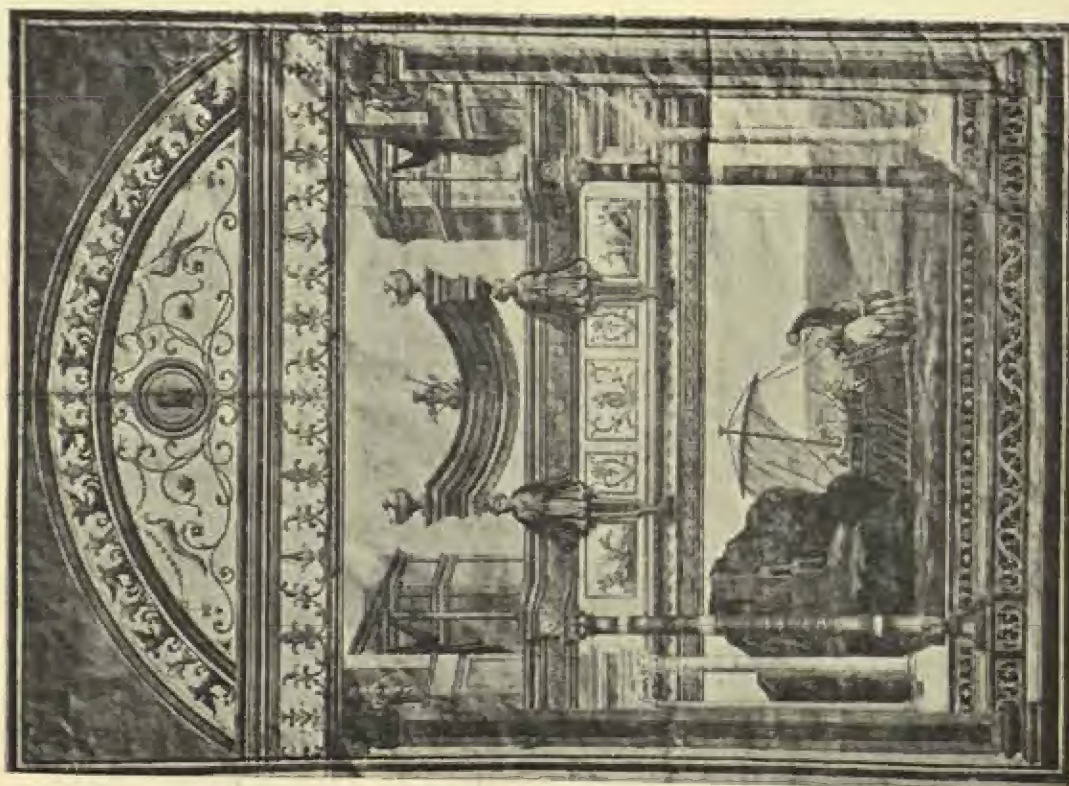


FIG. 9.—DRAWING IN THE TOPHAM COLLECTION, ETON COLLEGE (VI. 3)
From a house under the Basilica of the Flavian Palace

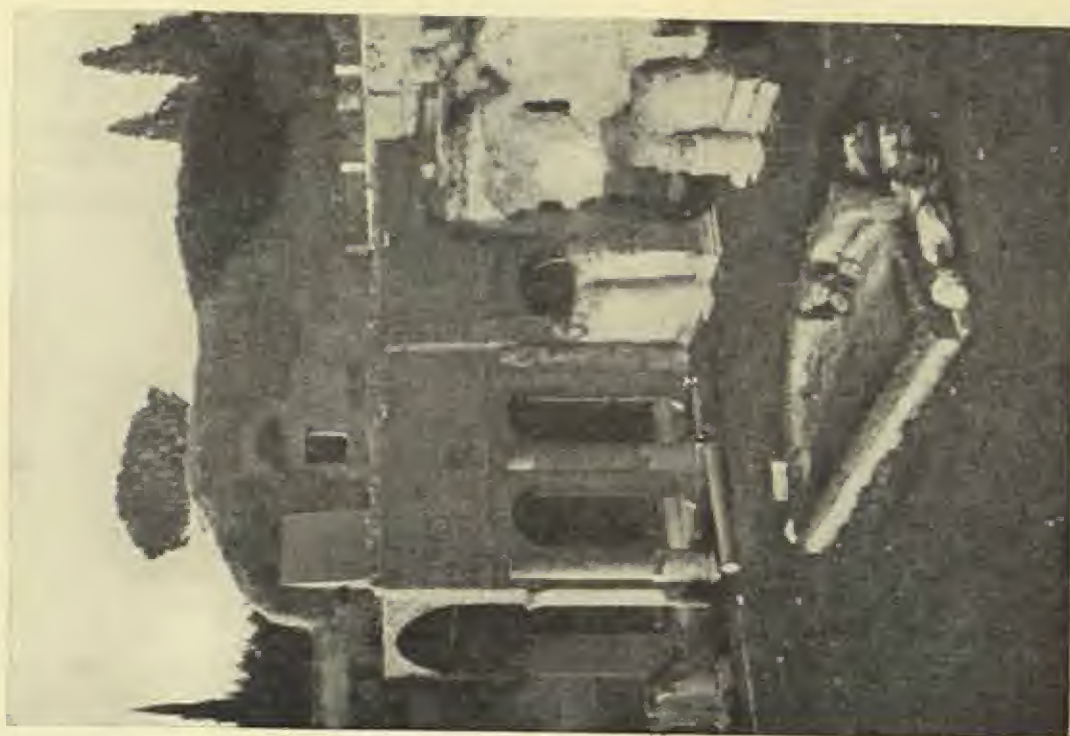


FIG. 10.—"STADIUM" OF THE FLAVIAN PALACE

dumque), whereas from the other sites proposed the Aventine would have been hardly visible—to the temples of Fides on the Capitol and of Pudicitia in the Forum Boarium, or down the valley of the Circus to the temple of Honor and Virtus at the Porta Capena—no mere abstractions introduced to fit the metre, but deities whose shrines were actually in sight.

The successor of Augustus, Tiberius, erected the first of the great imperial palaces on the north-west summit of the hill known as the Cermalus (Fig. 7, p. 559). Caligula extended it towards the Forum, and we are told that he considered the Temple of Castor as the vestibule of the palace.* That this is no mere rhetorical exaggeration has been shown by the recent discovery under the floor of S. Maria Antiqua† (see below) of an open water tank, once lined with marble, which must have once stood in the middle of a great peristyle or courtyard, and is orientated with the palace of Tiberius. Of his bridge from the Palatine to the Capitol, which was destroyed by his successor, no remains, naturally, exist.

It was probably Claudius, on the other hand, who constructed a splendid and magnificent residence on the south-east summit of the hill, the Palatium, some remains of which were known as many as 200 years ago under the name of the "Baths of Livia," while other portions, discovered in the early eighteenth century, have only just been brought to light. Drawings of them, made to the order of Dr. Topham, are in the valuable library which he bequeathed to Eton College. This palace was in two storeys, and was decorated with paintings and pavements of coloured marbles of great beauty.

Nero had already planned a huge palace which should join the Palatine with the Esquiline (*domus transitoria*), when the fire of 64 A.D. which destroyed it enabled him to realise his projects in still larger measure. But on the Palatine he had time to do but little, and we can attribute to him nothing but a few foundations, which were driven through the burnt remains of the palace of Claudius. The palace of Tiberius, on the other hand, seems to have survived this fire, but to have been seriously damaged in another conflagration in 80 A.D., a little

after the return of Titus from Jerusalem. But in any case Titus and his father did not regularly inhabit the Palatine; Vespasian, we are told, lived there but little (if the palace of Tiberius had not survived he could not have lived there at all), preferring the Horti Sallustiani on the Pincian Hill. It was thus on Domitian, after the imperial residences on the Palatine had been entirely laid to waste, that the task of reconstruction fell. It seems likely that he first devoted his attention to the



FIG. 8.—BALCONY OF THE PALACE OF TIBERIUS AS RESTORED BY DOMITIAN

palace of Tiberius and Caligula on the Cermalus, and what is known as the "Bridge of Caligula" above the Clivus Victoriae is simply a balcony in two storeys, which served to "finish off," so to say, the huge arched substructures of this palace—a balcony which may also be traced at the east angle of this vast pile (Fig. 8). He also constructed, or at any rate began, a new approach to the Palatine from the Forum on the same site as the vestibule of Caligula, and the great hall known as the Temple of Augustus and the two halls behind it, which in the sixth century A.D. became the church of St. Maria Antiqua, are ante chambers to the series of inclined

* Suet. Caligula 22: partem Palatii ad forum usque promovit aede Castoris et Pollucis in vestibulum transfigurata.

† S. Maria Antiqua was destroyed in the earthquake of Leo IV., and was immediately succeeded by S. Maria Nova, founded by the same Pope on the site of the temple of Venus and Rome.

planes which lead up from the Forum to the Clivus Victoriae. But the huge arches which span the road, and which extended the area of the palace considerably towards the Forum—so much so as to take away all sun and air from the unlucky Vestal Virgins, whom we find making all sorts of alterations in their house in order to keep out the damp—are due to one of his successors, probably Trajan, and at the same time were built the vaulted chambers on the south-west near the house of Augustus. It is very noticeable how the humble dwelling of the founder of the empire was respected by all his successors, who preferred to build huge arched substructions (rather like the extensions of Waterloo Station) to carry their palaces rather than encroach on his house. Of the superstructure of the palace of Tiberius nothing is left, and the area is now occupied by a lovely garden. Below this, on its south-east side, runs a crypto-porticus, or covered gallery, in one portion of which fine ceiling decoration is still preserved, generally associated with the murder of Caligula, but wrongly, for we are told that not a night passed without some ghostly visitation in that house until it was destroyed by fire; and further, a smaller and earlier passage has recently been discovered not far off where it is far more probable that the deed was done. From this crypto-porticus a branch leads to the far larger palace which Domitian erected on the remainder of the hill, upon the ruins of the palace of Claudius, and of one or more houses of the Republican period, themselves covered by other buildings. Some of these also came to light in the early eighteenth century (Fig. 9). Its main entrance was approached by the Clivus Sacrus, of which we have already spoken, which was spanned by an arch erected in Domitian's honour, but demolished, like his equestrian statue, after his death. His palace falls into five main sections:—

(a) The state apartments on one floor only (whereas the earlier palace of Claudius had two), grouped round a very large peristyle, with a shallow open tank in the centre. On the north-east are two great halls, the one in the centre 100 feet wide, with a smaller one, a basilica in plan, on the left, and a still smaller room (perhaps a lararium) on the right. On the opposite side of the peristyle is a very large triclinium, or state dining room, facing north-east, and therefore intended for use in summer. On each side of it windows opened into a nymphæum, a room with a fountain basin in the centre.

(b) The residential portion, a part of which, approached by a staircase with a curiously modern light well, lies at the lower level, the rooms being grouped round a courtyard, while the rest, at a higher level, is now incorporated in the Villa Mills, an architectural monstrosity about a century old in the Strawberry Hill Gothic style, built by and belonging to an Englishman named Charles Mills.

(c) The so-called Stadium or Hippodrome, which (as we learn from a letter of Pliny the younger) was a favourite shape for a formal garden—a walled space at the lower level surrounded by arcades, the top of which is at the upper level (Fig. 10). On the further side from the Villa Mills is the great *Exedra*, a huge semi-circular domed niche, perhaps added by Hadrian, who seems to have been responsible for the construction of the *thermae* adjacent to it, which are not well preserved.

(d) The portion of the palace to the south-east of the garden, all at the upper level and reached from the top of the arcades. The superstructure is almost entirely ruined. This last portion of the palace was much added to by Septimus Severus, who constructed a series of enormous arched substructions, a considerable part of which has fallen. His famous *Septizonium*, the last ruins of which were destroyed by Pope Sixtus V., was simply intended to mask these unsightly rows of arches.

(e) The great walled square at the south-east angle of the hill, probably the *Horti Adonis*, marked by the church of S. Bonaventura on its south-west edge and of S. Sebastiano in the centre. Here some authorities wrongly place the temple of Apollo.

Otherwise, with the few additions we have noted, the Palatine remained much as Domitian had planned it; and he has left his mark on it, just as Julius Caesar and Augustus are responsible for the main outlines and for much of the actual building in the Forum.

"I could wish that it were possible for me to tell you something in regard to the excavations of the Imperial Fora. I can at least say that Professor Lanciani is the president of a commission which has been entrusted with considerable powers and funds for the acquisition of their sites. Modern Rome is confronted with precisely the same traffic problem as that which the emperors, down to Trajan, had to deal with, until he finally solved it by occupying the whole space between the Capitol and Quirinal with his great Forum, the internal decoration of which, as a recently discovered draw-



FIG. 11.—BASILICA AT PORTA MAGGIORE (an aisle)

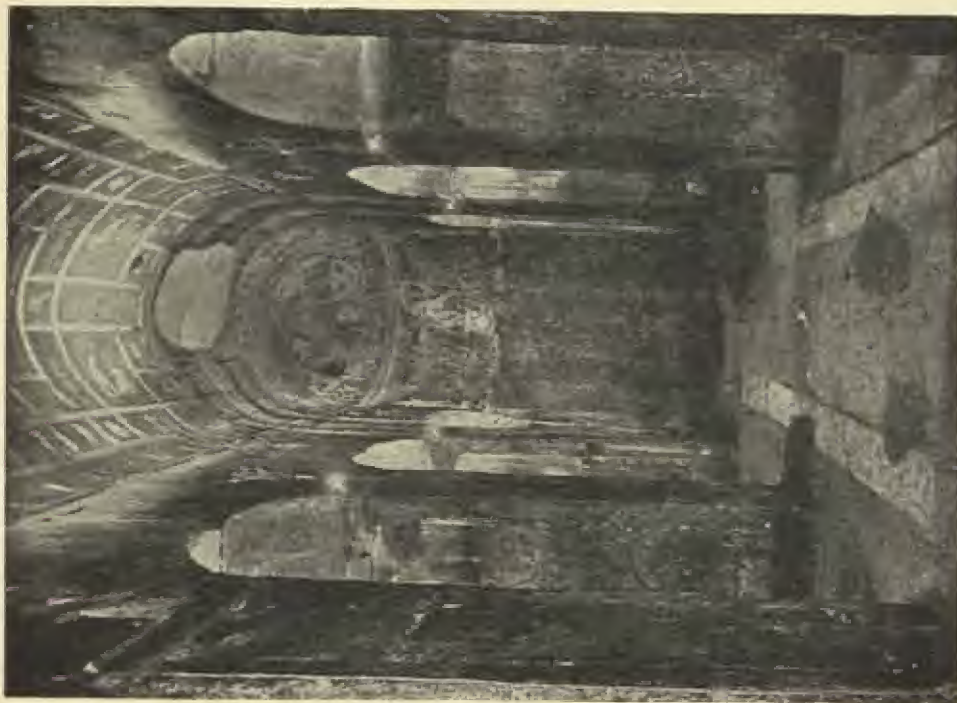


FIG. 12.—BASILICA AT PORTA MAGGIORE (the East end of the Nave)

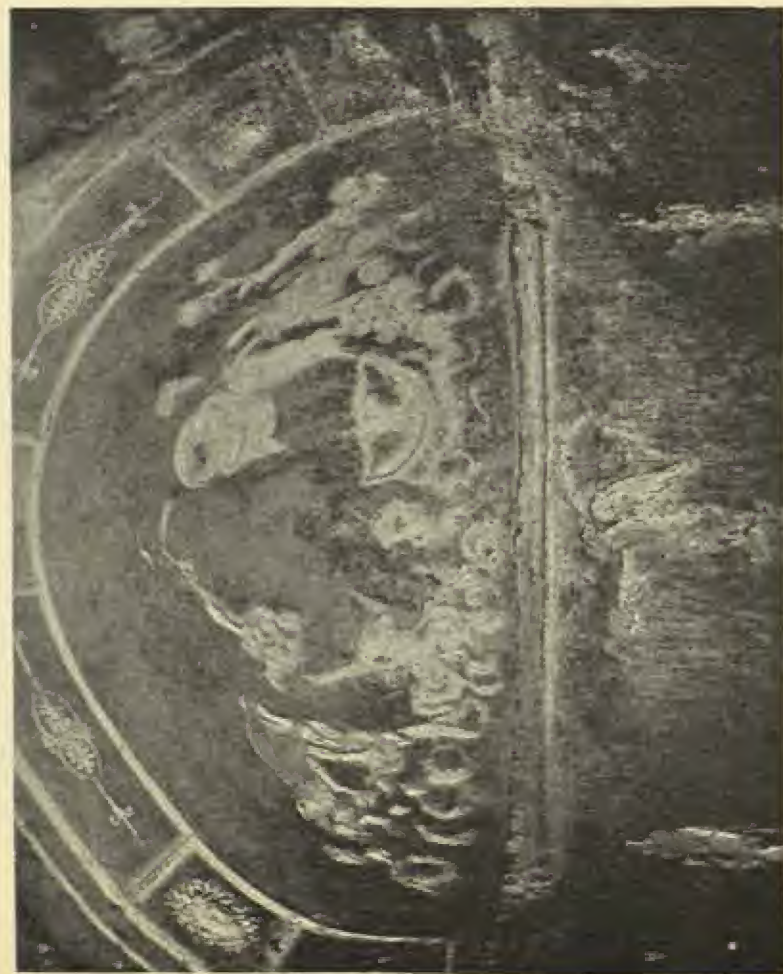


FIG. 13.—BASILICA AT PORTA MAGGIORE (Semi-dome of the apse)

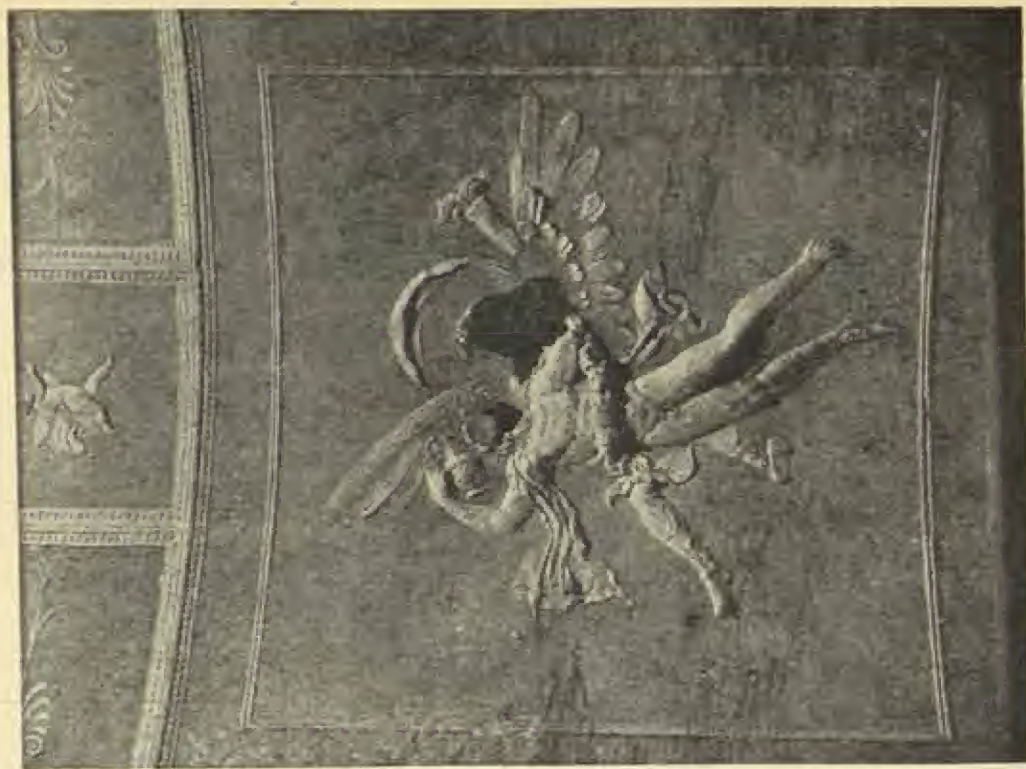


FIG. 14.—BASILICA AT PORTA MAGGIORE : RAPE OF GANYMEDE
(Detail of the vault of the nave)

ing shows, was identical with that of the Forum Transitorium, columns projecting slightly in front of an enclosure wall. (Professor Lanciani might, indeed, write to one of his friends of to-day in much the same terms as those that Cicero used in writing to Atticus to tell him of his share in carrying out the projects of Julius Caesar. (*Ad. Att.* iv. 16.)

The account I have just given you must be treated as provisional in so far as it may have to be revised when the full official account of these excavations, which have been carried on in the very centre of the capital of the ancient world, is vouchsafed to us. The case is somewhat different in regard to the other discoveries of which I have to speak to you, for all of them have been described in more or less detail in official publications. From these, indeed, are taken the photographs which I shall now proceed to show you.

No discoveries of first rate importance have been made of recent years within the centre of the modern city, but it is worth noting that the construction of two large banks in the Piazza Colonna, one of them the Banco di Sconto, of which a good many of us heard a little too much at the beginning of the year, led to the discovery of a large group of blocks of houses of the middle of the second century A.D., and not of the Porticus Vipsania, which apparently did not extend so far to the south as had hitherto been believed.

The exploration, under the direction of Professor Lanciani, of the substructions of the Baths of Caracalla, have thrown great light upon the details of the construction of these baths, and have brought to light the largest sanctuary of the Persian Sun God Mithras that is known to us—which was introduced there at a later date. Considerable work has also been done in the outlying portions of the baths, which would now form an excellent subject of study for one of our architectural students.

I may add that though there has been a good deal of building activity in the central portion of Rome during the last few years, the other few important outstanding discoveries with which I shall deal have all been made in the outskirts, and all either during or since the war. First of all comes the famous basilica near the Porta Maggiore, which was discovered in 1917 owing to a landslip under the Naples main line, caused by the presence there, hitherto unsuspected, of the light shaft of its vestibule. The exact date to which it belongs, and the

purpose which it served, are still the subject of much controversy. Personally, I am inclined to accept the theory that it belonged to the Stilian family, a member of which, T. Stilius Taurus, was accused of magical practices by Agrippina, the wife of Claudius, and took his own life to escape a worse fate. I am inclined to think, too, that the desire for secrecy explains the method of construction. It would seem that the concrete of which the walls and piers were constructed was poured into pits sunk in the virgin soil, which was also used to support the vaults while hardening. When the concrete had set the earth was removed and the interior of the building cleared from beneath, so as not to attract attention. The interior was, indeed, approached by a long corridor leading into a vestibule, a shaft in which gave light indirectly to the basilica itself; this has a nave and two aisles (Fig. 11), separated from one another by pillars supporting arches (Fig. 12). The walls and vaulting are decorated in white stucco. The figures and scenes are not in themselves difficult of interpretation, though the principle of their selection is not at first sight obvious. Mrs. Strong, however, who interprets the difficult scene in the apse as one of purification by the ordeal of water (Fig. 13), points out that all the other scenes can be referred to the wanderings of the soul and its progress towards its final goal* (Fig. 14).

Not very far off, in the Viale Manzoni, a hypogeum of quite a different character and date has still more recently been discovered. Above it was a lofty brick tomb of a type familiar enough to us in the Via Appia and the Via Latina, in the base of which (the only part preserved) is a sepulchral chamber with arcosolia and burials in the floor. The paintings are damaged, but Adam and Eve may clearly be recognised. Just outside is a staircase leading to a landing, on the left of which is the entrance to a subterranean chamber with vaulted roof and a large light shaft in the centre, and an arcosolium on the right and left. The paintings with which this chamber is decorated have recently excited considerable interest owing to the fact that an incautious correspondent announced the discovery here of contemporary portraits of Peter and Paul (Figs. 15, 16). It is not impossible that they may be recognised in two of the twelve male figures which decorate the lower part of this wall, but there is no doubt that the paintings cannot be earlier than

* See Mrs. Strong's article in *Journal of Hellenic Studies*.



FIG. 15.—PORTRAIT OF S. PETER (?)



FIG. 16.—PORTRAIT OF S. PAUL (?)

the end of the second or the beginning of the third century A.D., and not B.C., as an unfortunate misprint made me state in my letter to the *Literary Supplement of the Times* in December, 1921. The paintings on the upper part of the wall have not yet been interpreted with any certainty. It is generally agreed that they are Christian, but some have desired to see gnostic influence in them. I myself are rather inclined to suppose that there was a certain amount of intentional concealment of their Christian character; thus, the scene which very likely represents the Sermon on the Mount might, to a pagan, represent any shepherd with his flock below him, and the interesting scene which shows a man on horseback met outside the city by a cortege of persons who have come to do him honour might be intended to recall to the Christian beholder Christ's entry into Jerusalem, a small donkey feeding in the background giving him the key to the true meaning of the scene. The Good Shepherd, several times repeated in the vault, might just as well be Orpheus: while the group of twelve draped male figures which is found in the other chamber is flanked on each side by a group of six men and six women in pairs, who certainly cannot represent the twelve apostles.

The building we have just described lay close to the Via Praenestina before its divergence from the Via Labicana, and a number of interesting tombs have recently been found on some of the other high roads which radiate from Rome. An especially

interesting group is that which has come to light on the Via Ostiensis, near the church of St. Paul, outside the walls. The tombs fall into four different periods, and the best of them are some columbaria (which take their name from the small niches, like those of a dovecot, in which the cinerary urns are placed) belonging to the second period, from the beginning of the empire to the end of the second century after Christ.

Some other columbaria have been found under the church of S. Sebastiano on the Via Appia, which are especially interesting from the freedom of their style and the beauty of their stucco decorations—in one is a peacock with the tail shown in colour, while in the other the ceiling of the principal chamber is covered with the tendrils and bunches of grapes of a vine springing from the angles.

A little beyond the church a tomb has been found which marks the transition between cremation and inhumation (beginning of the third century A.D.), having been constructed from the first, with eleven small niches for urns and three recesses for bodies.

The foregoing account cannot pretend to be in any way complete. Many discoveries of minor interest have, perforce, been omitted, and those which I have described have not been dealt with with as much detail as they deserve. Even as it is, I fear that I may have abused your patience; if I have done so I can only plead my own interest in the subject, and hope that I may have succeeded in awakening yours.

Discussion

THE PRESIDENT (MR. PAUL WATERHOUSE, M.A.) IN THE CHAIR

The PRESIDENT: I have the pleasure to say that the vote of thanks will be proposed by Commendatore Lanciani, whose name is known to all students as a great pioneer of Roman excavation.

COMMENDATORE LANCIANI, D.C.L. (Honorary Corresponding Member): It is with pride and pleasure that I have accepted the request of the Council of our Institute to move a vote of thanks to Dr. Thomas Ashby for his interesting and exhaustive lecture on Recent Excavations at Rome. I must also tender him the expression of my personal gratitude for the kind mention he has made, more than once, of my name in connection with archaeological exploration in the field of Roman antiquities. Questions of dates at my age are not exhilarating nor satisfactory, but I cannot help remembering that we have been friends and co-workers for a trifle over a quarter of a century, and that in such a

comparatively long lapse of time, of almost daily intercourse, our friendship has never been obscured by a passing cloud. The memory of the happy years *ante bellum*, when we were wont to explore together peaks and dales of the Sabine, Prenestine and Alban ranges, when, after reaching our goal, we shared our delightful piece of stale bread sitting on the conquered pinnacles, and feeling *mens sana in corpore sano*; the memory of those days, I say, will never fade away. On the contrary, the nearer I approach the end of my career, the stronger those happy ties become.

Dr. Ashby's subject, "Recent Excavations in Rome," was a difficult one to treat, on account of the *embarras du choix*. It seems that no war, no political unrest, no financial distress, can interfere with the fecundity of Rome's sacred soil; in fact, more excavations have been made—although for a different purpose—and

more discoveries have taken place since 1914 than in the previous peaceful decade. Dr. Ashby's scheme and frame of speech was rather synoptical; it could not have been otherwise in view of the enormous number of facts he had to mention without entering into details. I shall mention but one or two instances.

Just before we left Rome—I left it before he did—a tremendous discovery was being made, which may shake the foundations of our belief in the Roman traditions. On the top of the Mons Vaticanus (Monte Mario) an archaeologist, Signor Dall'Osso, has discovered the remains of an early settlement, much earlier than the eighth century before Christ. I have visited only twice these interesting excavations, and I can only say there are remains of Etruscan graves and log huts with thatched roofs, and a round hearth filled with charcoal in the centre of the hard beaten clay floor. They have also found prehistoric pottery and flint implements of the neolithic age and many fragments, which bring the birthday of Rome to a date that will, as I say, shake a good deal our faith in ancient traditions. These discoveries have not yet been officially described, and therefore we must reserve our judgment until we have the materials at hand.

Another point on which I may say a few words is the one concerning the scheme of which Dr. Ashby has made mention, the archaeological reconstruction of the centre of Rome, including the Capitol, the Monument to Victor Emmanuel, and so on. The original scheme was much more modest; we wanted to create an archaeological park comprising the Via Appia, the Baths of Caracalla and the Mediæval churches round them, and many monuments. The work has been done, a work to which I have devoted many years of my life, and it has succeeded beyond our expectation. But there is a new addition. The Italian Government have taken advantage of the political situation, and are asking that the Villa Mattei shall form part of the indemnity which the Germans must pay to Italy, and the villa and the *Passeggiata*, which are next to each other, will form one archaeological park with which no other in the world can be compared, for beauty and interest. But this is not the end of it.

For the same archaeological reason, it was decided to destroy the Palazzo Caffarelli, which was the seat of a certain Embassy, which shall remain nameless. While we were building the foundations for the monument to Victor Emmanuel and other buildings, we found that somebody else had been there before us, excavating long tunnels and going into the bowels of the earth; and while the Municipality of Rome owned but 7,500 square metres, our greedy neighbour had acquired 21,000, including the Temple of Jupiter Capitolinus. We are proud to state that such an inconvenient state of things is already a matter of the past. I have the honour of being President of this Committee for the reorgani-

sation of the archaeological centres of the City, and I need not assure you that all our energies will be devoted to the accomplishment of this noble purpose. I know I shall have your unanimous consent in accepting my proposal of a vote of thanks to Dr. Ashby, the excellent Director of the British School at Rome.

Professor H. E. BUTLER: I was not aware that I was to have the pleasure of seconding this vote of thanks but nothing could possibly give me greater pleasure than doing so. It has been a great delight to hear my friend Dr. Ashby tell us of the more recent discoveries at Rome; I am backward in my knowledge of them, not having been in Rome for eleven years. It was therefore a great pleasure to me to hear of them, as, I am sure, it was to all of you.

There is one little mystery, which I should like Dr. Ashby to throw light upon. It is with regard to that corner of the Palatine which is occupied by the Church of S. Sebastiano, and which, I believe, has not been thoroughly sounded and excavated. Perhaps it is an unseemly thing to do to ask a question in seconding a vote of thanks, but it has always seemed to me rather curious that so many different views should have been expressed about this particular corner of the Palatine; without there being anything very definite to show. I excuse myself for asking this question by saying that Dr. Ashby has once more inflamed my curiosity on the point.

I most heartily second the vote of thanks; I can conceive no more interesting lecture, nor one on a more fascinating subject.

Professor BERESFORD PITE [F.]: I should like to support the vote of thanks to Dr. Ashby, and also to express the great pleasure it is to have Commendatore Lanciani with us again. I remember Dr. Ashby's former paper; I do not think we have had the pleasure of having him with us since 1910 at the Town Planning Congress. He then read an extraordinarily interesting and valuable paper, which is printed in the valuable volume of the Transactions of the Congress on the ancient walls of Rome. Commendatore Lanciani, a very old friend of any student of Rome, we have had the pleasure of having here before.

How interesting and alive a subject Rome is to us to-day! Rome, which had a doctrine of town planning, with a regular system of rectangular streets and a consistent outline, that it imposed upon its Empire from England in the North to the bounds of Syria in the East, along the Mediterranean Littoral, in Africa, Spain and Gaul—a stereotyped plan, based on a doctrine of town planning—was yet unable to apply its beneficent doctrine to its own capital. Rome utterly fails as an example of theoretical town planning, all theory having vanished under the pressure of circumstances, political and otherwise, in the same way that theories of town planners fade into fog and mist in

London. I have no doubt they had Commissions on Traffic in Rome, and made earnest endeavours to procure legislation, but the results indicate to us that the original crookedness of the highway between the valleys of the ancient cluster of villages, once crystalised, became sacred. The Via Sacra beneath the hills limited and hindered the application of the most potent town planning doctrines of the Empire. It was exactly the same at Athens. The city that had looked to Pythagoras for a scheme, was baulked in the effort of improvement by the abominable nuisance, the Acropolis, just as Rome was baulked by the Via Sacra. But genius was developed by these difficulties—created the extraordinary series of forums gradually becoming first rectangular, then dignified and beautiful around the crooked original forum Romanorum. Julius Cæsar, the hero of many wonders of military and political genius, was also a warm-hearted, generous contributor to the improvement of the heart of his miserably tangled Capital. Out of his own pocket he expropriated the property on which he laid out the first new forum, and the skill with which he created architectural space on an irregular site is manifest on the plan which has been shown to us this evening. The forums began to increase in magnificence and architectural dignity. The megalomania of these builders makes an architect's heart distend with admiration. The extravagance, the slave labour, the cruelty, the blackguardism which underlay it does not concern us at this moment; we cheer the swelling mass of architectural grandeur, but we find ourselves in the presence of this fact: that without evolving a single architectural form worth anything, they evolved an architectural system of planning, with rectangular porticoes, which to-day is the bread-and-butter of the competition designer. We live on these scraps which fall from the Roman architect's table; they are more useful to us than Greek. We cannot win a competition now with the pure Greek of the British Museum, but vulgar repetitions of the Roman fora do it effectively. And so the architectural circle revolves.

But there is much more to be noticed than this unending growth of scale which exploded itself in the scheme of the golden house of Nero. There is the extraordinary ignoring of all the civil conditions of life. Dr. Ashby will be able to assist us in this matter, but it really seems as if the Romans neglected the housing of their citizens, and concentrated themselves upon the provision of acre after acre of useless public spaces; it amounts to that by the time we get to the ultimate extent of the Forum of Trajan. And that is a very interesting and important symptom. Am I suggesting anything which is very wide of the mark when I say the population was forced into blocks of flats, just as we have been in our London, and that the congestion of the Metropolis of the world increased unduly? The people were even then being fed by dole and had learned to do

nothing; they lived on the glory of their Empire, and in crowded flats. There were interesting passages in the annals of Tacitus as to the fire in the days of Nero, which, he said, was not altogether to the detriment of the City, because new laws were made as to the laying-out of streets of a proper width, and regulations to avoid the difficulties from overhanging party walls. The Emperor himself volunteered to have the portico built, at the State expense, of any house of a citizen who would take up a site. That is very interesting if you realise that these porticoes were continuous, which masked whatever rubbish the owner of the site desired to put behind the Imperially-provided front. A very satisfactory way of providing a public architectural façade which will satisfy all criticism and leave entire liberty to the private owner behind.

There is much more which lies for our edification in the story which Dr. Ashby has touched upon to-night. History here repeats herself. We are in the possession of an Empire which has much the same political characteristics as that of Rome. Imposing peace upon a vast area and with similar difficulties in our own disreputable Capital, we find ourselves in the same architectural school, living on the same architectural pabulum, and scattering our unhappy products from Canberra to Canada.

Mr. E. P. WARREN [F.] : I would like to add my tribute to the charming lecture of Dr. Ashby, and to the waft of that eternal fascination of eternal Rome which he and Professor Lanciani have given us to-night. The more one is privileged to see of the freshly discovered antiquities of Rome, the more struck one is by the fact that their civilisation, as far as material needs went, had gone as far as, if not indeed a little further than, our own. There are very few things that we should have to give them to-day. The power of destruction by high explosives we have, electric light we have, and we have methods of locomotion they did not know; but as regards all the material pleasantnesses and well-being of life, I do not think the inhabitants of ancient Rome had much to learn from the inhabitants of modern London.

I was very much struck when, in 1913, I was privileged, with several other persons, to be conducted by Commendatore Boni to some excavations, then very recent, in which he showed us three houses superimposed one upon the other, and in one of them there were the remains of a hydraulic lift, in what we would call the engine room, with its bronze cylinders, posts and pistons. He also showed us all sorts of arrangements for heating, for the supply of hot water. And except in respect of light, I could not see that these Roman dwellings, dating from long before Christ, were much worse than the most modern and up-to-date flats in London.

I ask if Dr. Ashby can tell us as to the lighting of the streets of ancient Rome. I have never heard any authentic account of the manner in which the Roman streets

were lighted at night. I have always thought they might have been lit as are remote towns and villages in France and Central Europe, by means of lanterns suspended by strings. Also I should like to ask whether the Roman vehicular traffic was such as to require direction. I surmise that it is not unlikely that there were Roman police on point duty. And one more question is as to the use of reinforced concrete. I have seen concrete reinforced with iron in the vault of the baths of Caracalla, and I ask if there are other instances of that to be found in Rome.

Mr. A. T. BOLTON [F.] (Curator of the Sir John Soane Museum) : There is one question I should like to ask Dr. Ashby, and that is in regard to the Exedra, of which he showed us a photograph. There were a number of these structures in Roman times, and I should like to ask whether he thinks they were a direct importation from the East, or did they, in his view, spring from anything previous in Italy? It has struck me that the origin of them would be found in the East, rather than in the West. We have had a remarkable paper by Professor Baldwin Brown, suggesting that the origins of Roman Imperial buildings should be sought in the vanished cities of Antioch and Alexandria. It is many years since I tried to get an idea of the Palatine Hill; the multiplication of ruins there is extraordinarily baffling; there is, for instance, that great block by Septimius Severus, underworks which leave an extraordinary impression on the memory. The great arches and vaults which you see there are only paralleled in this country by the understructures of the Adelphi. In this vast undertaking you can see something equivalent to the Roman work, carried out in bricks and mortar by Scotch and Irish workmen. The old question of whether the early vaults were ever erected on earth centres might seem to find some support in the curious underground chapel which he showed us; but it has always seemed difficult to believe they built a hill to construct the vault, and removed the earth afterwards. In this case, however, it was a good building proposition to put in the piers first, arch them over on the roughly cored surface of the earth and then take out what engineers call the "pudding." Such an underground method of building a chapel or shrine would lend itself very well to the obscure Oriental worships which were coming into Italy at the time of the early Empire. I would conclude by inviting Dr. Ashby to the Soane Museum, where the manuscripts which were brought by the Adams, and from them subsequently purchased by Sir John Soane, would be a special attraction, and if Dr. Ashby has time, we shall be pleased to see him there.

Mr. THEODORE FYFE [F.] : I also would like to add my thanks to the lecturer. And it is a very great pleasure to see Professor Lanciani here. We owe him a great debt of gratitude, not only for his address, but for

having stood shoulder to shoulder with Dr. Ashby and so showing the solidarity of scholarship.

It was very interesting to me that Dr. Ashby showed us that underground chapel, because the one first discovered in the Forum, that of Santa Maria Antiqua, was shown to me by Mr. Rushworth, in the year of the foundation of the School at Rome. It seems natural that we Britishers are thrilled by stories of ancient Rome. In his masterly statement on the glories of the Forum, and particularly of the Palatine, in itself a marvel, I think Dr. Ashby must have been under the influence of some echo of that greatness which we might achieve here, if we tried.

The PRESIDENT : The time is approaching when we must express our thanks to Dr. Ashby, and ask him to say a few words more in answer to questions which have been put to him.

But before asking him to do so, I would like to say a few words, certainly not by way of adding anything which is good to what has been put before us, because I am one of the humblest of scholars in regard to Rome. I have a great respect for the Romans, so great a respect that I do not think I should have dared to speak with the levity which Professor Pite did in regard to that ancient institution; but I thank him heartily for his speech, which has raised many questions for thought.

It has been a great event, also, to have had Commendatore Lanciani here to-night. His long and unselfish work in the great field of Roman archaeology is one that every student of antiquity must thank him for, and that he has come here to-night, for the second time in a fortnight, is a very great compliment to us. We want Dr. Ashby to understand, from all of us, not only that we have greatly profited by what he has told us and been deeply interested in what he has shown us, but also that we greatly appreciate the compliment paid our Institute in that we are the recipients of this new and fresh information which he has brought to us to-night.

Dr. ASHBY (in reply) : I thank you very much for the extraordinary kindness with which you have received my paper, and I thank my very old friend Professor Lanciani for the very kind words he spoke about me. This association has been to me a great pleasure in life, and long may it continue!

I will try and deal with the questions which have been put, but I fear I may omit something; if I do, I hope the questions I omit may be put again.

As to town planning in Rome itself, there was, as I said in my Paper at the Town Planning Congress in 1910, a complete absence in the Capital of the regular planning which is found in other cities of the Empire, but that, after all, is only a further example of the Roman genius. Some archaeologists have said that every rectangular camp is a Roman camp, and that others are not Roman. But the Roman was not a fool. If he had a pentagonal hill, he would not put a rect-

angular camp on it. The planning of Rome was fixed from very early times by the position of the hills and valleys and of the roads that led out of Rome. Rome very soon started a proper road system, and one of the reasons for the success of the Roman Empire was, that the Romans understood the importance of lines of communication; that side of military science they understood thoroughly. The roads by which they conquered first the neighbourhood, then Italy, then the whole world, were the very arteries through which their power flowed; and the result was that the points by which they left the City could not be changed, and the highways were most important things. There were thus fixed lines, issuing through certain gates, and naturally the hills and valleys have been very much obliterated. You will not force a natural scheme into a stereotyped line, and they had the sense not to try to do that, just as they showed sense in so many other things. In the case of the Roman religion they had the sense of adaptation; in the provinces they adapted it to the native gods.

Hardly any private houses are preserved in Rome itself, as a matter of fact. But there are plans of them preserved, and if we want to know what the Roman houses were like we have to go not to Pompeii, but to Ostia, and there we shall find a different state of things; for there was a great predominance of flats in Ostia. There is an entrance which will lead straight to one flat, there is another entrance which will lead to another flat upstairs, and so on, and that plan will be repeated in three or four storeys, one above the other, as shown by Mr. Lawrence, Mr. Pierce, and others. I want you to send us some more students like them, and like Mr. Bradshaw, too. When you see our students' drawings you will realise that no better work could be found in the British School at Rome than the collaboration with the Italians which is going on there at present in regard to the drawings of Ostia; some of the drawings you will see published in one of the Italian architectural reviews. You will see how modern the houses were, houses arranged around a courtyard, like the houses of the early Italian Renaissance. There are only two or three Pompeian houses in Ostia, and recent excavations in Pompeii

itself have shown they were not monotonous, but were very diversified. I think our traditional ideas about old Roman houses must undergo a radical transformation. We find a different scheme of planning in different houses.

With regard to the lighting of ancient Rome, it was by means of lanterns. There was exclusively foot traffic by day; carts were only allowed by night. Only privileged persons could drive by day, and that accounts for the narrowness of the streets though there was such a large population, something like 800,000. The ancients had very small bedrooms, as we see in Republican houses. They lived largely in the street, and they required somewhere to walk which was sheltered from the sun and the rain, and the Forum of Trajan was the last step towards a solution of their greatest traffic problem. Why a solution was not attempted earlier we do not know; probably others had shirked the problem.

With regard to the use of reinforced concrete, I know of no other instance of the use of metal than that in the Baths of Caracalla. Reinforced concrete was frequently used, but the ribs were formed of tiles, placed one above the other.

With regard to whether the exedra came from the East or from Syria, I cannot offer an opinion. But those who have read the late Commendatore Rivoira's "Lombard Architecture" will know he maintains that many features of Roman architecture were derived from the East, and some from the West. No doubt, as in most cases, the truth lies between the two. I think the tendency is more to a Roman origin than from the East. There is too much desire to attribute to the East what was really born in Rome.

With reference to the Basilica, I regard the use of earth for the setting of vaults as an exceptional feature, and only to be explained by the desire for secret worship to so construct these places that the construction should not be noticed. If there had been a big hole visible, people would have asked what it was for.

I hope I have dealt with all the points, and I would again say I hope you will send us more students of the type you have sent so far.



A History of Architecture on the Comparative Method*

By JOHN W. SIMPSON, PAST PRESIDENT R.I.B.A.

THERE has come to me a letter from the Editor of the JOURNAL asking for a short article reviewing this book. A "review"—I take it—implies critical examination, and the foundation of all criticism is judgment based, necessarily, upon appointed rules and precedents. That, at any rate, is the ancient, the classical method. Of late years there has sprung up a more irresponsible procedure. The reviewer is required to vacate the judgment seat, to abandon, as Symonds puts it, "the ferule of the archididasculus and assume the humbler pointing-rod of the showman." Sir Banister Fletcher's book, in its present form, has taken some twenty-five years to the making, beginning at a modest handbook at which examiners sniffed, grown now through successive editions and many reprints to a Standard Index; a compact reference to architectural books and buildings the world over. How should a conscientious critic treat such a work in a "short article"? It is not a treatise designed to maintain a theory, which the reviewer may briefly support or demolish by argument and sweet or bitter words. It purports to be—and is—history, written on modern lines, a collection of facts dispassionately presented for the reader's information. "Here," says the author, in effect, "is the fruit of a long harvesting methodically sorted; make what use you please of it. I give you my authorities. Do you disagree with my statements? Your quarrel is with them, not with me!" One cannot weigh and analyse so considerable a work, save at greater length than would be tolerable in this place; and a dissertation on the proper way to write architectural history would be jejune and profitless. A combination of the methods of criticism we have indicated would seem appropriate to our case.

To begin with, we have before us an octavo volume of xxxiv + 932 pp., including some 400 full-page plates and 28 maps. The book is well produced, the type sharp and legible, the photographs and geometrical drawings, some 3,500 in all, well and clearly rendered, and Messrs. Batsford are to be congratulated on the feat of limiting its thickness to rather less than two inches inclusive of its stout cloth covers. So much for its appearance.

The contents comprise a List of Illustrations and their authorities, grouped under the respective "styles"; and to this list the general index supplies the needful

cross-references, since illustrations and text are paged consecutively. The arrangement is commendable, but would be much improved were those items in the index of which illustrations are given marked with an asterisk. A short but sufficient glossary of technical terms ends the work, which is opened by a still shorter explanatory preface.

Having thus touched on its externals, we turn our pointing-rod to the essential nuclear matter of the book.

Nothing could be more orderly than its marshalling. Divided into two Parts, dealing respectively with what the author terms the "Historical" and the "Non-Historical" styles, these Parts are in turn subdivided into sections, each treating of a "style." Each of these sections is dealt with under five headings: (1) the six leading Influences which have shaped the "style"; (2) the Architectural character resulting therefrom; (3) descriptions of notable Examples of the "style"; (4) a Comparative Analysis, under seven sub-headings, of the elements which constitute its buildings; and (5) a short Bibliography of its special literature. To each section is prefixed a contemporary map of the country, or area, of whose architecture it treats. Such is the scheme followed by the author throughout both Parts of the book, to the end that "the influences, character, examples, and comparative features of each style can be contrasted with those of any other style." Adding only that the very limit of concision seems to have been attained, both in the prefatory summaries and the descriptive paragraphs of the various divisions, and that the proof-reader deserves a word of praise, we leave the showman's platform and assume the judicial ermine of the orthodox critic.

To the enquiry whether this addition to our already numerous Histories of Architecture serves any useful purpose, six successive editions and reprints, a steady annual sale of some hundreds of copies, are a sufficient answer. It is probably the permanent "best-seller" among books on architecture. The author well deserves his reward, for the labour involved must have been prodigious, and he has given us a book which—in its present form—is a most useful complement to an architect's library; a Standard Index, wherein he may find at once the essential facts about any building of note. We emphasise this view of Sir Banister Fletcher's work because therein lies—as it seems to us—its chief value. Its short, uncritical descriptions are a guide to the study in greater detail of bygone work. There is, we know, a school which decries such research as fatal to origin-

* *A History of Architecture on the Comparative Method*. 6th Edition. By Sir Banister Fletcher. London. 40s. B. T. Batsford.

ality. Sir Joshua Reynolds knew better; "if we consult experience," said he, in his Sixth Discourse, "we shall find that it is by being conversant with the inventions of others that we learn to invent." For all, then, that the book is dedicated, modestly enough, to the use of "students, craftsmen, and amateurs," its main appeal will be, for the reasons we have given, to the practitioner. Indeed, the information it supplies is so extensive, so condensed, and so technical, as to make tough reading for the beginner. Students may, and doubtless do, avail themselves of its compactly ordered facts as satisfying morsels for their examiners; but it is at least probable that the very method adopted in its compilation—the separation of "styles" into compartments—may tend to give them a false idea of the historical development of their art. For the author, not content with sorting out his "styles," must needs set them apart in groups, distinguishing "Historical" from "Non-Historical"; and the latter group comprises Saracenic, Indian and Chinese architecture! Does he forget how War and Commerce, those indefatigable seed-carriers, have been at work throughout all history mingling the race-germs, which under strange conditions have generated strange forms, bearing nevertheless traces of their origin? Sir Banister's "Tree of Architecture" is more logical than his classification, for it shows all "styles," both historical and non-historical, springing from common root elements.

If we may be pardoned for repeating what we have said before in this JOURNAL, "there are no stylistic divisions; the periods melt one into another; their apparent border lines disappear when examined at near hand, and it is only by contrasting extremes, at wide intervals of time, that paper classifications are constructed. Architecture must be looked on as a whole, a majestic movement of evolution through the ages. Ramses and Ictinos, William of Wykeham and Mansart, all dealt with the same eternal elements; each in his own way, moved thereto by the conditions in which he lived and worked."

But, when all is said, our criticism is directed rather to the labels than to the contents to which they invite attention. Had the two "Parts" been distinguished as "Western" and "Eastern" architecture, and "Periods" substituted for "Styles," there would be but little logical exception to be taken on the score of terminology. Considered as a Dictionary of architecture, the book is worthy of all praise. Sir Banister Fletcher has invented a system whereby an immense mass of constantly needed material is ingeniously tabulated for easy reference; and he has developed his system with mathematical precision. Original in conception and conscientious in detail, this is the best book of the kind that has yet been written.

Architectural Acoustics*

THE PHYSICAL RELATIONSHIP BETWEEN BUILDING AND MUSIC

By HOPE BAGENAL [A.]

The publication in book form of the late Professor Sabine's Harvard experiments on applied acoustics, together with the plans and calculations of the buildings remedied and designed as a result of his labours, makes it possible to review positively a subject held to be obscure.

It is rare that any branch of accurate knowledge owes so much to a single mind as architectural acoustics owes to Sabine. The growth of the subject in its modern aspect is worth a brief survey. Previous to Sabine the underlying principles have been recorded by several scientists: by Wren in his *Parentalia*; by Professor Tyndall before a select committee of the House of Commons in 1867; by Joseph Henry at the Smithsonian Institute in 1856; by Lord Rayleigh in vol. ii. of his *Theory of Sound*; and by Guadet in his *Elements of Theory of Architecture*. It is reasonable to inquire why our considerable knowledge of pure acoustics, gained in the last century, had no equivalent effect on the designing of auditoria. The reason, in its simplest form, is that the general body of acousticians were content in their laboratory experiments to assume open air conditions and to

ignore the physical effect of the enclosing walls and ceiling of their laboratory. Sabine showed that acoustics, as an exact science, comes under a different category when we consider not only the experiments themselves but also the hall or laboratory in which the experiments are carried out. In a lecture at the Sorbonne, delivered by him in 1917 before the Société Française de Physique, not included for some reason in the volume under review, occurs this illuminating sentence: "Experiments made in a laboratory are seriously affected by the surrounding conditions, by the fact that the walls reflect 94 per cent. of the sound if they are wood, 96 per cent. if they are plaster and more than 97 per cent. if they are (painted) brick. Consequently, experiments designed to measure sound under such conditions are equivalent to attempts at measuring light in a laboratory where the platform, the walls, the floor and even the tables are brilliant mirrors."

It was in 1895 that Sabine began to experiment upon a notorious lecture theatre, known as the Fogg Art Museum Lecture Room. This auditorium when empty had a reverberation of $5\frac{1}{2}$ seconds—that is to say, a syllable uttered in an ordinary tone of voice lasted for $5\frac{1}{2}$ seconds before it died away, during which time even a slow speaker would have uttered the succeeding twelve or fifteen

* *Collected Papers on Acoustics*. By Wallace Clement Sabine. Harvard Univ. Press. London: Humphrey Milford. 1922. Price 17s.

syllables. The experiments carried out in this room lead to the first statement of Sabine's *Law of Reverberation* and a whole new series of experiments was presently undertaken, having as its object the acoustic analysis of all the ordinary building, lining, and upholstering materials for the whole range of the musical scale. The experiments were precise, tedious and expensive; they lasted for a long series of years and were often of necessity conducted by night, when city noises were at their minimum. They called for a peculiar mixture of skill and pertinacity in the investigator. The results are a great tribute not only to the scientific power of Sabine himself but to the Harvard Faculty of Applied Science, which considered the time and expense worth while in the interests of technology. An opportunity of testing the preliminary data occurred as early as 1898, when McKim was instructed to prepare designs for the new Boston Concert Room. An interesting collaboration between architect and physicist followed. Sabine saw at once that the success of the project must depend largely on the accuracy of musical taste in the matter of orchestral requirements, and set about investigating it. He accompanied the Boston Symphony Orchestra to a number of concert rooms, and ascertained the reverberation of each. The Leipzig Gewandhaus and the Old Boston Concert Room were finally selected as models, and their acoustic conditions, involving a reverberation of 2.3 seconds, were reproduced in McKim's new building, designed to seat a much larger audience, and successfully carried out.

Four years later, in 1902, another series of investigations on this cardinal question of musical requirements were conducted by Sabine, in which five distinguished instructors of music were asked to note down their opinions of five different rooms suitable for chamber music. The results showed that for this class of auditorium a reverberation of 1.1 seconds was generally acknowledged as satisfactory.

In 1911 Professor Jäger, in Austria, corroborated and developed Sabine's theory in a Paper entitled *Zur Theorie des Nachhalls*, contributed to the Akademie der Wissenschaften in Wien. A laboratory for the study of acoustics of buildings was opened the following year in Dresden. Contributions to the various problems connected with the Harvard theory were also made by Franklin, Watson, C. M. Swan and other physicists in America and by M. Marage in Paris. In 1912 Albert Kahn built a large auditorium at Michigan University to seat 5,000, to a pre-arranged acoustic programme, with complete success. Soon afterwards, Sabine was associated with Messrs. Carrère and Hastings in the difficult acoustic problems involved in the treatment of the New Theatre, New York. This led him to give special attention to theatres, with results embodied in the interesting chapter *Theatre Acoustics*. During the war Sabine came to England. In 1917 he was admitted to the floor of the House of Commons during a debate. The R.I.B.A. JOURNAL published in that year, by special permission, his paper on *Architectural Acoustics* read before the Franklin Institute, and embodied in the book under review. In Paris he lectured at the Sorbonne and before the École des Beaux Arts, and was consulted by the Bureau des Inventions. When America entered the

war he was employed at Washington as well as in the Science Schools at Harvard, and according to his friend and colleague, Mr. E. H. Hall, embarked upon "a course of toil that must end his life." He died shortly after the close of hostilities. The fine acoustic laboratory specially built for him at Geneva, Illinois, was apparently scarcely used before his death, and is now under the direction of his son, Professor Paul Sabine, who is continuing his work.

Now Sabine's "discovery" that hard wall surfaces in acoustics are equivalent to brilliant mirrors in optics has a direct bearing upon design. Obviously "brilliant mirrors," that is to say reflecting surfaces, are required near the source of sound, and should not be placed in haphazard positions; their effect should be part of a general scheme in which diffusing, resonant and absorbing surfaces also would play their proper part. In all auditoria, of whatever kind, the surfaces of walls, fittings, upholstery and audience fall under one of those categories—are either reflecting, diffusing, absorbing or resonant. The general phenomenon, reverberation (the time taken for a sound to die away in a room) is an index of the total acoustic result of all the surfaces in the room in relation to its volume, and for that reason is so important a measurement. Sabine's law in its simplest form is: (i) That reverberation varies directly with volume—that is to say, the larger the room the longer the reverberation, and (ii) that reverberation varies inversely with the amount of sound-absorbing material in the room—that is to say, that for a given volume the more absorbents introduced the shorter the reverberation. For a true comparison of one room with another by this law a standard loudness of the sound emitted had to be decided upon, and also, since reverberation was found to vary with pitch, experiments had to be made to cover the musical scale. The tables of the absorbing-power-coefficients for the ordinary building and upholstering materials are given for a standard loudness of sound and for every octave from C_1 to C_7 (see page 78 *et seq.*, *Variation in Reverberation with Variation in Pitch*). It will be seen from the curves that generally the absorption is greater for the upper registers. This has an important bearing on the designing of concert rooms and opera houses. A note sounded on any instrument consists, as Helmholtz has shown, of a fundamental tone giving its pitch, and in addition a series of overtones giving its quality or *timbre*. Instruments therefore possessed of powerful and characteristic overtones will be affected by the presence in a concert room of certain absorbents. Their tone will be modified. Brass instruments and men's voices are of this kind. On the other hand, purer instruments such as 'cellos, flutes, and boys' voices tend, by the same means, to be reduced in loudness but not modified in tone. This explains the observed fact that solo voices well known in the opera house or concert room often appear strangely sharp and harsh when heard in a cathedral, and also that 'cellos and flutes sound well in a large bare hall where their simpler tones have full play.

With such facts before us it requires no special knowledge to recognise that reverberation or the prolonging of a sound after its source has ceased is an energy condition of the whole room, and when measured in seconds

will give an index of the loudness, the distinctness and the tone of musical sounds. For choral and orchestral music the slight overlapping of sounds produced by a reverberation of 2 seconds or more enhances the tone; but too long a reverberation will spoil the strict time element in the music. Hence the value to architects of the standard reverberations ascertained by Sabine, namely, 2.3 seconds for a large orchestra hall and 1.1 seconds for a small hall for chamber music. The speaking voice is, of course, only a special case where the sound is of pitch C_4 to C_5 and of a moderate loudness. For the speaking voice, therefore, the reverberation should be as short as possible, compatible with adequate loudness in the rear seats.

If, therefore, a programme of requirements for a large auditorium were to be drawn up, a suitable reverberation could be specified, and the architect would then allow for the necessary absorbing surfaces to ensure it, exactly as he would allow for a good modern system of ventilation. He would then find that he could economise absorbing material by a suitable relation of surfaces, and also by reducing the volume of the hall to a reasonable minimum. This is in fact the tendency in modern American theatre design.

But we cannot limit the implications of Sabine's teaching to modern technology; it has also an interesting historical bearing. The relationship of building to music exists to-day and has always existed; the auditorium has always been a powerful instrument to the music produced within it. Perhaps the most interesting chapter in the book is that on the origin of the musical scale. Here Sabine examines, in the light of his own research, Helmholtz's famous theory of the harmonic origin of intervals, the theory that "melody is resolved harmony." In the monumental work, *Sensations of Tone*, the compound nature of a musical tone was first analysed by Helmholtz and shown to consist not of a single pure tone but of a fundamental and a series of upper partials or overtones, all harmonically related. This led to the explanation of *consonances* as due to the existence in tones of different pitch of partials of the same pitch. According to Helmholtz, the notes of the musical scale have come to be arranged at such interval distances as will provide the largest number of consonances when they are heard in harmony; the consonances depending on the identity of the overtones of the notes heard coincidentally.

But this theory, which holds for modern chordal music, and to a less obvious degree for mediæval polyphonic music, appeared to Helmholtz to break down when applied to the unison music of the ancients, where harmony in the sense of chords, or coincident tones of different pitch, did not exist. To overcome this discrepancy, Helmholtz constructed his theory of melody as rhythm, based on a supposed instinctive knowledge on the part of early musicians of the compound nature of tones. But this, as Sabine points out, assumes the knowledge of the accomplished musical student. "This power of analysis goes rather with supreme skill than with the early gropings of an art." It may be urged that Aristoxenus was a theorist sufficiently accomplished; but the scales he analysed already existed, and in forms so developed as to imply a long ancestry. There is no reason to suppose that classi-

cal music was not part of the general Mediterranean culture, having its roots in Egypt. Sabine disputes that any such subsidiary theory is necessary. The *actual experience* of harmony was always possible in primitive music where a melody was sung in a building of brick or stone or even in a cave giving a sufficient reverberation. In reverberation we have the contribution of an energy condition giving the required time element and the required tone element for simple harmonies. The time element causes the overlapping of successive notes, and the tone element, as we have noticed in the modern case, renders active all those partials prevalent in the man's voice, upon the relations of which Helmholtz constructs the scale. We must look, then, for the origin of the musical scale in the cellae of Egyptian temples and from the palace halls of early stone-dwelling peoples. We have evidence of the constructive influence of the auditorium to guide us in the case of mediæval music. The Gregorian chants developed in a definite relation to the reciting or intoning note of the priest—a "note" which was also really a tonality, caused by the long reverberation of the mediæval church. Within this tonality it was easy and natural to sing melody in tune; that is consonantly. No one who has experienced the impulse to sing in an empty room, and detected within himself an almost physical response to tone under those conditions, would doubt that wherever those conditions existed they must have influenced experiments in music.

Sabine's example of the musical case of the African negro transplanted to America is less convincing than others that could be drawn from ethnology. In certain primitive peoples the anomaly is found of two musics—an open air rhythm and beating of large drums distinguishable at great distances, highly complicated and developed and obviously impossible of performance indoors, and, parallel to that but without any obvious cultural connection, a musical scale with airs not unlike the European which, though now always heard out of doors, might well on a theory of migrations have been derived from some previous contact with a stone-dwelling people.

In conclusion, we would pay every tribute to the content of this single volume, into which has been resolved the labours of an exceptionally acute and sensitive mind, capable of taking a wider view than the specialist's. But it is a pity that no index has been provided, that references are often lacking, and that the book has not apparently been edited by a student of the special subject and its many problems.

INTERNATIONAL HOUSING CONGRESS AT ROME, SEPTEMBER 1922.

Mr. G. Topham Forrest has been appointed by the Council delegate of the Institute at the Congress.

MR. W. E. WATSON.

Mr. W. E. Watson [F.] of Mitre Court Chambers, Temple, has been called to the Bar from Gray's Inn.

Further Notes on the Composition of Ancient Mortars; and Mortar and Plaster from St. Paul's Cathedral

By W. J. DIBDIN, F.I.C., F.C.S., etc.

BY the kind co-operation of Mr. W. D. Caröe, F.R.I.B.A., who supplied me with further samples of ancient mortar collected by him, I am enabled to submit to the Institute the results of their examination, in addition to those given in my report to the Science Committee of the Institute in 1911.

Also, by the kind permission of Mr. Mervyn Macartney, F.R.I.B.A., I am enabled to submit the results of the analysis of twenty-five samples of mortar and plaster from various parts of the structure of St. Paul's Cathedral, which were collected in connection with the inquiry as to the safety of the building.

The detailed results of these two series are set out in the accompanying tables, which present the respective data in a convenient form for reference and comparison in a manner similar to that adopted in the report to the Science Committee: see table opposite page 28 of that report.

ANCIENT MORTARS.

In series No. 1, the seventh (? ninth) century mortar from Monkwearmouth (Durham) church is a very fine sample of hard mortar having a crushing strength of no less than 323 lb. per cubic inch, although the proportion of unslaked lime to sand and grit is as high as 1 to 0.3. The soluble silica, viz., 0.98 per cent., precludes the presence of a highly hydraulic lime, trass, or pozzuolana. The high proportion of lime is, however, largely accounted for by the presence of unburnt chalk with fossils, indicating that natural chalk was employed to help out the aggregate, a practice which was not at all unusual. A similar case is that of the sample from St. Paul's Cathedral, given in column 23, Series 2, "Mortar from the Core of the Main Pier A, about 30 feet from Nave Floor." The seventh century mortar contained as much as 6.9 per cent. of clay, etc., in the matters insoluble in hydrochloric acid. Of this quantity about one half was of an organic nature.

In column No. 2, Series No. 1, is given a sample of mortar from Westminster Abbey, being a portion of the original stonework of the first part of Henry III original mortar, early thirteenth century. This contained no earthy matter, and the sand was fine in character, all passing an eighth inch mesh. The proportions, by volume, of unslaked lime to sand, etc., being 1 to 0.53. It was a hard, white mortar.

In column 3 of the same series a sample is given from a church at Darenth, said to be Saxon. Query, latter part of the eleventh century. This was a hard, whitish

mortar with water-worn black flints, and contained 2.88 per cent. of ferruginous clay, equal to 4.32 per cent. of the sand and grit. The proportion of lime to sand, etc., was 1 to 1.4. It contained a trace of copper.

In the next column is given a sample from the window of the same church, which is either Saxon or first ten years after the Conquest. This contained no earthy matter, and was very friable. The sand was very fine, all passing a thirty-second inch mesh. The proportion of lime to sand, etc., was as high as 1 to 0.5 by volume.

In column 6 an interesting sample is given of Roman mortar from the aqueduct at Frejus—the Forum Julii of the Romans. It is a genuine piece of the original Roman construction, collected by Mr. Caröe from the centre of the wall. The date of construction is uncertain, but the city was an important one in the time of the Emperor Augustus, so that it must be considerably more than two thousand years old. The mortar was very hard, and firmly adhered to fragments of granite. The crushing strength was 163 lb. per cubic inch. A noticeable feature was that the "earthy matter" in the matters insoluble in dilute hydrochloric acid consisted of slightly ferruginous clay and silica, doubtless derived from the decomposition of granite. The sand and grit consisted of clean quartz sand, with many fragments of mica, hornblende and degraded granite fragments. The proportion of unslaked lime to sand and grit was 1 to 3.6.

The above results of the examination of the various samples are in agreement with those of the examinations given in the report to the Science Committee, particularly with regard to the absence of abnormal quantities of soluble silica, the presence of small quantities of unburnt earthy matter such as clay, etc., and in many instances the large proportion of matrix to aggregate.

ST. PAUL'S CATHEDRAL.

The samples from St. Paul's Cathedral may be divided into seven divisions, viz.:

A.—Plaster of paris or gypsum: see columns 1, 7, 8, 15, 16, 18, 19, and 20.

B.—Mixed plaster of paris and lime mortars, columns 21 and 22.

C.—Normal mortar with high proportions of lime, columns 2, 3, 5, 6, 10, 13.

D.—Fat lime mortars, columns 4, 17.

Column	1	2	3	4	5	6	7	8
Description	Used in Setting Stones	B ₁ From interior of Crypt Piers filling interstices between the rubble of which the Piers are built.	B ₂ Taken from surface of solid piece of Limestone in Concrete	A ₂ Cement Pointing	B ₃ Mortar from a position deeper in the Core of the Crypt Pier about 3 feet from the surface	C From the back of the stone facing of the S.W. Pier of the S. Transept. One of the Piers carrying the Dome. Mortar in which the stones are set and backed	B ₃ Lime from Pier "A" in Crypt	Mortar cut from face of lead-filled joint in Arch of S.W. $\frac{1}{4}$ Dome.
Insoluble in dilute HCl Per cent.	2'59	35'90	27'10	1'58	31'3	33'30	2'50	1'70
Soluble Silica "	0'30	2'95	0'70	0'20	3'5	2'15	0'50	0'60
Oxide of Iron and Alumina "	2'30	2'25	1'15	0'30	2'0	1'50	0'60	Trace
Lime (CaO) "	28'60	31'35	36'25	51'60	30'0	35'29	30'27	31'85
Magnesia "	Trace	Trace	Trace	Trace	Trace	0'07	Trace	Trace
Carbonic Acid (CO ₂) "	3'80	16'20	22'80	31'00	12'6	16'20	Trace	None
Sulphuric Acid (SO ₃) "	42'10	Trace	Heavy Trace	1'23	0'95	0'69	42'83	45'50
Water of Hydration "	19'50	10'40	11'20	11'50	17'1	10'80	23'30	19'80
Alkalies, moisture and loss "	0'81	0'95	0'80	2'59	2'55	—	—	0'55
	<u>100'00</u>	<u>100'00</u>	<u>100'00</u>	<u>100'00</u>	<u>100'00</u>	<u>100'00</u>	<u>100'00</u>	<u>100'00</u>
Earthy Matter "	—	—	—	0'69	3'3	2'0	Trace	Trace
Description of Earthy Matter "	—	Little Ferruginous Clay	Little Ferruginous Clay	—	Ferruginous	Clean Ferruginous	—	—
Nature of Sand or Grit "	—	Grey Medium Sand	Grey Medium Sand	Very fine Grey	Fine Grey	Fine, clean Grey	Fine Grey Sand	Fine Grey Sand
Grading of Washed Sand, etc. "	—	—	—	—	—	—	—	—
Retained on $\frac{1}{8}$ inch mesh Per cent.	—	—	—	—	—	—	—	—
" " " " " " " "	—	—	—	—	—	—	—	—
" " " " " " " "	—	—	—	—	—	—	—	—
Passed $\frac{3}{32}$ " " " " " "	—	—	—	100'0	100'0	100'0	100'0	100'0
	—	—	—	<u>100'0</u>	<u>100'0</u>	<u>100'0</u>	<u>100'0</u>	<u>100'0</u>
Percentage of Clay, etc., in Grit "	—	Heavy Traces	Heavy Traces	—	10'5	6'0	—	—
Lime corrected to Commercial Lime of 80 per cent. CaO Per cent.	—	39'2	45'31	64'5	37'5	44'1	—	—
Volume of Unslaked Lime (i.e., Commercial Lime $\times 2\frac{1}{2}$) to Sand and Grit "	—	1 : 0'36	1 : 0'24	—	1 : 0'75	1 : 0'28	—	—
Physical Character of Sample "	Very hard, consisting of Plaster of Paris in three layers.	Hard Mortar	Hard Mortar	All Carbonate of Lime Limestone	White, very hard	White, very hard	Like very hard, dry "Putty," soft surface. All Gypsum	Very hard dry Plaster. All Gypsum
Reaction "	Neutral	Alkaline Present	Alkaline Present	Alkaline Present	Alkaline Quantity present	Strongly Alkaline Quantity present	Neutral None	Neutral None
Free Lime "	—	—	—	—	127 lbs.	111 lbs.	111 lbs.	490 lbs.
Crushing Strength per cubic inch "	A	C	C	D	C	C	A	A

THE COMPOSITION OF ANCIENT MORTARS

Results of Examination of Samples of Mortar from St. Paul's Cathedral

SERIES 2

9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
Piece of Stone from over S.W. Transept Window	Mortar taken from uppermost Octagon Gallery level of N.E. Bastion, East Door jamb of door to Gallery over N. Choir Aisle. Original Mortar	Pier "A," South Transept, from E. side of Pier, on surface	Mortar taken from West side of South Transept over Vault where wall has dropped and been wedged up with this piece	Mortar from Paving Brick from topmost Octagon N.E. Bastion (Wren's Original)	Specimen of Caen Stone (?) from Octagon room, N.E. Bastion	Stopping in crack from South Buttress + Dome	Wren's Original Mortar from under West Window of South Transept	Filling in Mortar West side of South Transept, under Large Window		S.W. Quarter Dome. Mortar taken from haunching of top Course under Quarter Gallery	Mortar from added drafted Stone at angle under Quarter Gallery over Pier B	Mortar taken from inside of Brick Cone	Mortar taken from wide joint under impost of Crypt Pier, where iron wedges used, Pier D	Mortar taken from the Core of Main Pier A, about 30 ft. from Nave floor	Experiment as to Water absorption power	Two samples of Mortar squeezed out from the joints during the settling of the building sent for crushing tests	
								99a Stone	99b Plaster							From pockets in Dome Buttresses	From pockets between Nos. 1 and 2 Buttresses
4'30 0'50 0'60 46'68 Trace 34'40 4'12 7'20 2'20 <u>100'00</u>	27'40 0'25 0'85 35'00 Trace 26'93 1'03 7'50 1'04 <u>100'00</u>	17'80 3'60 15'65 27'50 Trace 18'24 3'32 12'76 1'13 <u>100'00</u>	34'00 0'60 0'75 33'00 Trace 24'60 1'61 5'44 — <u>100'00</u>	43'00 1'30 1'10 27'00 Trace 21'30 1'10 3'40 — <u>100'00</u>	5'00 0'30 0'20 51'50 Trace 39'80 0'86 2'00 0'34 <u>100'00</u>	0'80 1'20 0'30 29'70 Trace 34'40 42'00 24'40 1'60 <u>100'00</u>	6'50 0'20 0'50 31'00 Trace 3'80 37'20 20'40 0'40 <u>100'00</u>	1'20 0'10 1'70 51'00 Trace 38'30 2'57 4'60 0'53 <u>100'00</u>	3'65 1'85 0'90 31'30 Trace 1'70 41'60 19'00 — <u>100'00</u>	1'82 Trace Trace 31'60 0'22 0'00 44'86 20'60 0'90 <u>100'00</u>	11'70 0'30 Trace 27'40 0'00 0'00 39'16 20'40 1'04 <u>100'00</u>	28'46 0'40 1'30 35'70 Trace 22'00 3'74 8'40 0'00 <u>100'00</u>	12'28 0'20 0'40 33'88 Trace 12'42 25'05 15'08 0'60 <u>100'00</u>	39'22 1'90 0'90 34'00 Trace 10'72 0'38 11'08 1'80 <u>100'00</u>	Weight of mortar taken, 10'665 grammes Weight of water ab- sorbed, 3'382 grammes ∴ 100 lbs. of mortar will absorb <u>31'71 lbs. of water</u>	Blocks about 2 in. by 2 in. by 2 in. Wetted. Softened gradually to 180 lbs. Dry. 130 to 300 lbs. when spalling com- menced Weight of water absor- bed, 26'4 per cent. The crushing tests in- dicated in the case of the wet mortar a rapid giving way or rearrangement of the materials, although the disintegrated mass still resisted consider- able pressure.	215, 125, 100, 200 Av. 160 lbs. 100, 180, 280, 250 Av. 202 lbs.
0'80 Black and frothy	0'20 Ferruginous, Gritty	7'20 Very Ferruginous	—	—	—	—	—	Nil	Trace	—	—	Trace	Trace	Trace	—	—	—
Fine Grey	Fine Grey	Fine Grey Ferruginous	Fine Grey	Fine White	—	Fine Ferruginous	Fine Grey	Fine Grey	Fine Grey	Fine Grey	Fine Grey	Clean Grey with a little Ferruginous matter	Clean Grey Sand	Grey with some ferru- ginous matter	—	Weight of water absor-	bed, 26'4 per cent.
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
100'0	100'0	100'0	100'0	100'0	100'0	100'0	100'0	100'0	100'0	100'0	100'0	100'0	100'0	Nearly all 100'0	—	—	—
100'0	100'0	100'0	100'0	100'0	100'0	100'0	100'0	100'0	100'0	100'0	100'0	100'0	100'0	100'0	—	—	—
10'0	0'80	40'5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	43'75	34'4	41'25	34'87	All Carbonate of Lime	—	—	—	—	—	—	44'62	This is a mixture of Gypsum and Lime mortar in almost equal proportions and very hard	42'5	—	—	—
— Limestone	1 : 0'25 Very hard White	1 : 0'22 Very hard Cement nature	1 : 0'33 Hard White, with shells which were excluded in the above	1 : 0'5 Very hard White	— Very hard with metal- lic ring	— Very hard White smooth surface, Gypsum	— White, very hard, metal- lic ring, Gypsum, with 6½ p.c. of sand	— Grey stone with so ft Plaster adhering. Gypsum	—	— Very hard white plas- ter in thin layers. Gypsum	— Very hard white plaster Gypsum with fine sand	1 : 0'26 In thin pieces ½ in. to 1 in. thick, hard Lime Mortar with 6 p.c. Gypsum	— Mortar proportions = 1 : 0'24	1 : 0'41 Fairly hard, contains unburnt chalk and fragments of charred wood	—	— Very hard, almost like Cement Mortar	— Very hard White
Slightly Alkaline Trace	Alkaline None	Slightly Alkaline None	Faintly Alkaline None	Strongly Alkaline None	Alkaline None	Distinctly Alkaline Trace	Faintly Alkaline None	—	—	Slightly Alkaline None	Neutral None	Faintly Alkaline Trace	Faintly Alkaline 0'5 p.c. Free Lime	Strongly Alkaline 20 p.c. Free Lime now present	—	None	None
—	—	—	—	458 lbs.	—	—	—	—	—	—	—	—	—	180 lbs.	—	—	—
F	C	G	E	C	F	A	A	D	A	A	A	B	B	E			

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E.—Mortar mixed with chalk as aggregate, columns 12 and 23 (the latter containing fragments of charred wood).

F.—Limestone, column 9.

G.—Roman, or similar cement, column 11.

In columns 24, 25, and 26 are given some determinations of the water absorption power and crushing strength of mortar squeezed out from the joints during the settling of the building:—

A.—Plaster of paris was used in setting stones, column 1; in the pier "A" in the crypt, column 7; on the face of the lead-filled joint in arch of south-west P/4 dome, column 8; for stopping the crack from south buttress dome, column 15; in Wren's original mortar from under west window of south transept, column 16; filling in mortar west side of south transept, under large window, column 18; for flaunching of top course under quarter gallery, south-west quarter dome, column 19; for added draft stone at angle under quarter gallery over pier B, column 20.

B.—Two examples are given of mixed plaster of paris and lime mortar—viz., for inside of brick core, column 21, and in joint under impost of crypt piers, where iron wedges were used, pier D, column 22.

C.—Lime mortars were found in the interior of the crypt piers, column 2; in the surface of limestone in concrete, column 3; in the core of the crypt pier, column 5; in the back of the stone facing of the south-west pier of the south transept, column 6; in the original mortar on the east door jamb of door to gallery over north choir aisle, column 10; for the mortar from paving brick from topmost octagon north-east bastion (Wren's original), column 13.

D.—Fat lime mortar was used for "cement pointing," column 4; and filling mortar, west side of south transept, under large window, column 17.

E.—Mortar, with unburnt chalk as aggregate, was taken from west side of south transept over vault, where wall has dropped and been wedged up with this mortar, column 12; and for the core of main pier A about 30 feet from nave floor, column 23.

F.—Two samples of limestone (? Caen) were examined, one from south-west transept window, column 9; and a second from octagon room, north-east bastion, column 14.

G.—Only one sample in any way resembling cement was submitted for examination—viz., from pier A south transept, from east side of pier on surface, column 11.

From the data thus available it appears that when lime mortar (C) was used it generally contained ferruginous clay, in one case, column 5, as much as 10.5 per cent. of the sand, etc., and that the proportion of lime to aggregate was very high, the modern "1 to 3" being roughly reversed, or "3 to 1." The soluble silica factor was very variable, ranging from 0.25 to 3.5 per cent.

In columns 24, 25, and 26, series 2, are given the results of some physical tests of the mortar. An ex-

periment on the absorption power showed that an air-dried sample absorbed 31.71 per cent. of its weight of water. The crushing tests of two samples of mortar squeezed out from the joints during the settling of the building showed that when wetted one sample "softened" gradually to 180 lb. per cubic inch by the "giving way" or rearrangement of the particle.

The second wetted sample broke at 160 lb. per cubic in. When tested in a dry condition the mortar broke at from 130 to 300 lb., when spalling commenced. A second sample broke at an average of 203 lb. per cubic in.

The Danger to St. Paul's

R.I.B.A. FUND

The President of the Royal Institute has received the following letter from Canon S. A. Alexander, Treasurer of St. Paul's Cathedral:—

"I am writing on behalf of the Dean and Chapter of St. Paul's to ask your attention to the papers enclosed with reference to the new Appeal for the Preservation of the Cathedral. The Institute sent us, very kindly, a hundred guineas in 1914, and we hoped that it might be possible for you to give us some further support at this critical time."

The Dean and Chapter of St. Paul's are asking for the sum of £100,000 for the absolutely essential work of repair on the piers and arches supporting the dome of the Cathedral, which have been declared insecure by the Special Commission of Architects and Engineers* appointed last autumn to examine the condition of the building. The cost of the work on the South Transept, now almost completed, has been defrayed by a fund raised by public subscription in 1914. This is now almost exhausted, and a further £100,000 is necessary to enable the repair of the defects recently disclosed by the Commission's report to be carried out.

The Council of the Royal Institute have decided to establish a R.I.B.A. Fund and to appeal to members for subscriptions. The Allied Societies of the R.I.B.A. in the Provinces have been invited to open subscription lists in their own districts and to forward collectively to the R.I.B.A. the amounts so received. The Council itself appeals especially to London architects to send subscriptions, however small, to the Fund, so that a worthy contribution may be made by the Architectural Profession towards safeguarding the strength and permanence of the masterpiece created by the daring genius of Wren. There is no more fitting or sincere method in which architects can commemorate the approaching bicentenary of the death of one of the greatest of their number.

The list will be closed at an early date, and members are therefore invited to forward their subscriptions to the Secretary R.I.B.A. as soon as possible. A list of subscribers will be published in the R.I.B.A. JOURNAL.

* The Commission consists of Sir Aston Webb, P.R.A. (Chairman), Mr. G. W. Humphreys, C.B.E., Chief Engineer of the L.C.C., Mr. Basil Mott, C.B., Consulting Engineer, Mr. E. F. C. Trench, C.B.E., Chief Engineer to the L. & N.W. Railway, and Mr. Mervyn Macartney.

THE COMPOSITION OF ANCIENT MORTARS

Results of Examination of Further Samples of Ancient Mortar
collected by W. D. Caröe, Esq., F.R.I.B.A.

SERIES I

Column	1	2	3	4	5	6
Description	Seventh or Ninth Century Mortar. Monkwearmouth Durham.	Westminster Abbey, from a portion of the original stonework of the first part of Henry III. original mortar (early thirteenth century)	Church at Darenth, said to be Saxon, but probably the latter part of the eleventh century.			
			Large Sample from Church	From a Window which is either Saxon or first ten years after the Conquest	From Church	
Insoluble in dilute HCl	Per cent. 34.27	40.20	66.76	40.0	—	80.74
Soluble Silica	0.98	0.25	0.35	0.6	—	0.34
Oxide of Iron and Alumina	2.54	0.95	1.00	4.8	—	2.94
Lime (CaO)	33.40	26.16	16.40	30.2	—	7.64
Magnesia	Trace	1.40	Trace	Trace	—	0.07
Carbonic Acid (CO ₂)	21.70	20.60	12.30	23.4	12.7	5.20
Sulphuric Acid (SO ₃)	0.38	Trace	0.13	Trace	—	0.00
Organic Matter and Water of Hydration	6.73	10.44	3.06	1.0	—	Trace
Alkalies, moisture and loss	—	—	—	—	—	3.07
	100.00	100.00	100.00	100.0	—	100.00
Earthy Matter	2.37	None	2.88	None	?	3.24
Description of Earthy Matter	Containing 1.32 of organic matter unburnt earthy.	—	Ferruginous clay	—	Ferruginous clay	Slightly ferruginous aluminous powder.
Nature of Sand or Grit	Grey and white sand with quartz and water-worn flints.	Fine sand.	Clean sand with small black water-worn flints	Fine ferruginous sand.	—	Quartz sand with a few particles of brick, fragments of mica, grey nodules consisting of quartz, felspar, etc.
Grading of Washed Sand, etc. :						
Retained on $\frac{1}{8}$ inch mesh	Per cent. 22.4	Nil	15.8	—	Evidently similar to larger sample from the Church	Nil
" " " "	13.1	Nil	4.3	—	—	3.04
" " " "	16.0	8.15	14.4	—	—	9.22
" " " "	13.1	12.71	10.8	—	—	26.05
Passed " " " "	28.3	79.14	5.8	100.0	—	61.69
Clay, etc.	7.1	Nil	48.9	—	—	—
	100.0	100.00	100.0	100.0	—	100.00
Percentage of Clay, etc., in Grit ..	6.9	Nil	4.32	Trace	—	4.0
Lime corrected to Commercial Lime of 80 per cent. CaO .. Per cent.	41.7	32.17	20.5	37.7	—	9.55
Volume of unslaked Lime to Sand and Grit, Corn. Lime $\times 2\frac{1}{2}$	97.3 : 34.27 = 1 : 0.3	75.0 : 40.2 = 1 : 0.5	47.8 : 66.76 = 1 : 1.4	88.0 : 40.0 = 1 : 0.4	—	22.3 : 80.74 = 1 to 3.6
Physical Character of Sample ..	Very hard, firmly adhering to stone.	Hard, white mortar.	Very hard, whitish mortar, with flints.	White, friable.	Very hard, with flints.	Very hard, white mortar, with granite chips.
Reaction	Neutral	Neutral	Alkaline	—	—	Very faintly alkaline
Free Lime	None	—	None	—	—	None
Crushing strength per cubic inch ..	323 lbs.	—	—	—	—	(180, 138, 172) av. 163 lbs.
Remarks	The aggregate contained unburnt chalk with fossils, which accounts for the high percentage of lime.	Fine sand with large proportion of lime.	Containing trace of copper.	Weight of Sample : = 0.67 gramme Too small for complete examination.	3.94 grammes Practically identical with the larger sample.	

The Architecture Club

PUBLIC DINNER

The Architecture Club held its first public dinner at the Hotel Cecil on 20 July. The evening, with Mr. J. C. Squire in the chair, was very successful, and some excellent speeches were made by Mr. St. Loe Strachey, the chairman, and Mr. G. K. Chesterton, among others.

The formation of this Club marks a step in the direction of greater public interest being taken in modern architecture. It is common ground that the art of architecture has been neglected by the Press and the public at large, and that it is only by stimulating the interest of the community that the general level of architecture will improve. With our dislike of anything that savours of advertising, we have perhaps erred hitherto in the contrary direction and have been shy of publicity of any sort. Perhaps we, as architects, are conscious that we are creators and that talking is not our particular province. The R.I.B.A., however, has itself done a good deal in the last few years to bring the public in touch with architecture. It has arranged lectures and has invited the Press to take note of its activities; but much remains to be done in the way of enlightenment, and an unofficial body of persons, consisting of architects and laymen, all working to further the cause of good architecture, may do much that an official professional body cannot perform, and such is the function of the Architecture Club.

The Club was the outcome of a conversation which took place some time ago between Mr. J. C. Squire, the writer and editor of *The London Mercury*, and myself. He was greatly interested in architecture, and was very much aware that the general mass of modern building is of poor quality architecturally, and wanted to get the voice of the Press to assist in bringing about a better state of things. It was agreed that a liaison between architects, writers, and newspapermen was necessary if this work was to be done on the right lines. Subsequently, meetings and informal dinners between a number of architects and pressmen took place, and the outcome of these was the founding of the Club.

The chief object of the Club is to enlarge public appreciation of good architecture and the allied arts, and especially of the best work of to-day. The membership is strictly limited in number, and consists of practising architects and laymen. The laymen, who are to outnumber the architects by two to one, are men of influence in the journalistic world, writers and prominent persons who can further the objects of the Club. Mr. Thomas Hardy, O.M., has consented to become the Hon. President. It has been encouraging to the promoters of the scheme to find what ready and practical interest has been taken in the Club by people in all walks of life, and how the idea has been welcomed. The Club is formed on broad lines; it will not concern itself with architectural politics—its sole aim and purpose is the improvement of English architecture in town and countryside.

OSWALD P. MILNE [F.].

Obituary

THE LATE MR. R. M. ROE [F.]

Richard Mauleverer Roe, who passed away on 30 July, in his 68th year, was a son of the late George Charles Lionel Roe, of Roesborough, co. Tipperary, his mother being a member of the Mauleverer family.

He commenced his professional career by serving articles with the firm of Beeston, Son, & Brereton, and afterwards fulfilled engagements with Mr. Cross (Bedford Estate Office), Mr. Lewis Holmes, and Messrs. Davis & Emanuel successively. He began to practise on his own account in Basinghall Street in 1881, and a few years later he took into partnership the late G. Richards Julian, though in 1892 this was dissolved by mutual consent. In 1915 he took into partnership his brother-in-law, J. Charles Bourne [*Licentiate*], who had been his assistant for many years previously.

Mr. Roe's practice was chiefly confined to the City of London, his executed works there consisting of office and business premises, in many of which his skill in overcoming the difficulties imposed by sites of irregular shape or restricted area is a marked feature. Where the available expenditure permitted anything more than a severely simple treatment, his designs are characterised by much taste and refinement in detail, and frequently show the extent to which he was influenced by the work of the early French Renaissance. The best example of his work is probably Gort House, at the corner of Mark Lane and Great Tower Street, built during the period of his partnership with Mr. Julian. Among other works may be mentioned the following houses in Basinghall Street: No. 57, Nos. 62 and 63, No. 64, Nos. 65 and 66, No. 70A (Bassishaw House), and Dunedin House in Basinghall Avenue. He was also responsible for No. 83 Cannon Street, Nos. 74 and 75 Cheapside, Nos. 36 and 37 Queen Street, Nos. 129 and 130 Fleet Street, and other buildings. He acted as architect, during a long period, for the City properties of the late Sir Tollemache Sinclair, Bart., for whom he designed several buildings in Fleet Street at the time that the scheme for widening that thoroughfare was being carried out. Though his work lay principally in the City, he also prepared the plans for houses erected at Hindhead by the late Mr. John Grover, and was responsible for important additions and alterations to Red Rice, Hampshire, for Lord Grantley. When the Cole Park estate at Twickenham was being developed some years ago, he acquired land there and erected about a dozen residences, one of them (Crane House) for his own occupation. These houses are characterised by much charm and individuality.

Mr. Roe was a rapid worker, and his designs, from the preliminary sketches to the full-size details, were usually the work of his own hand entirely. He had a great love for dramatic art and literature, and, being an accomplished French scholar, he produced admirable translations of several notable plays from that source.

Mr. Roe was elected an Associate in 1881 and a Fellow in 1889. He married Lilla, daughter of his former master, Mr. F. R. Beeston, and she survives to mourn his loss.

J. C. B.

Tenth International Congress of Architects, Brussels

4-11 September 1922

The Tenth International Congress of Architects will be held under the auspices of the Société Centrale d'Architecture de Belgique in Brussels from 4 to 11 September 1922, and will be accompanied by an International and a National Retrospective Architectural Exhibition.

It will be remembered that the outbreak of the war interrupted the preparations for the Tenth Congress of the regular series, which was to have been held in Petrograd in May 1915 under the patronage of the late Tsar.

The Société Centrale de Belgique will be celebrating the fiftieth anniversary of its foundation at the time of the Congress, and the architects of Belgium extend a cordial invitation to their foreign colleagues to join them in the celebration.

The Congress will include delegates from many foreign countries. The Belgian Committee is under the chairmanship of M. J. J. Caluwaers, with M. R. Moenaert as secretary.

PROGRAMME.

- 4 Sept. *Morning*.—Meeting of the Permanent Committee of the International Congress of Architects.
2 p.m.—Formal opening in the Palais des Academies.
Evening.—Reception.
- 5 Sept. 10 a.m.—Opening of the Architectural Exhibition in the Palais d'Egmont.
2-6 p.m.—Conferences.
Evening.—Receptions.
- 6 Sept. 9 a.m. to Noon.—Visits to buildings of interest in Brussels.
2-6 p.m.—Conferences.
Evening.—Receptions.
- 7 Sept. Visits to the devastated zone, stopping at Ypres, and spending the night at Bruges.
- 8 Sept. Visits about Bruges, returning to Brussels in the evening.
- 9 Sept. Excursion to Antwerp, visits about the city and up the Scheldt.
2-5 p.m.—Conferences, returning to Brussels in the evening.
- 10 Sept. 9 a.m. to Noon.—Visits to the Exposition.
2-6 p.m.—Conferences.
Evening.—Receptions.
- 11 Sept. 10 a.m.—Closing exercises.

SUBJECTS FOR DISCUSSION.

1. The responsibilities of the architect.
2. Schedule of charges.

3. The appointing of State and Municipal architects.
4. The rights of authorship of the architect.
5. The profession of architecture : its aims and its rights.
6. Women architects.
7. Public, national, and international competitions. The position of the winning architect in an international competition or of one working in a foreign country.
8. Town planning.
9. Small houses.
10. The influence of locality on architecture.
11. The preservation of historic monuments ; with consideration of their economic, hygienic, and social aspects.

EXHIBITIONS.

An Architectural Exhibition will open 5 September in the Palais d'Egmont, lasting two weeks.

It will be divided in two general classes : (a) Belgian—1 Retrospective, 2 Contemporaneous ; Jury, Messrs. Maukels, Mercenier, and Van Montfort. (b) Foreign—there will be as many sections as there are countries represented.

DUES.

The dues for members will be 50 francs ; for ladies accompanying members (wives and daughters only) 30 francs, which will give them the privilege of visits, excursions, and receptions.

LANGUAGE.

Official delegates may address the meetings in their own language. The official language of the Congress will be French, though any other language may be used provided a *résumé* in French is submitted at the same time.

BRITISH ARCHITECTS INVITED.

All British architects are cordially invited to take part in the Congress.

All those desiring to attend or to receive further information should communicate with

THE SECRETARY,
The R.I.B.A.,
9, Conduit Street, W.1.

The President and Mr. Edward P. Warren have been appointed delegates of the Institute at the International Congress.

R.I.B.A. Committees

SESSION 1922-23

The following Boards and Committees have been appointed by the Council for the Session 1922-23:—

FINANCE AND HOUSE COMMITTEE.—The President, the Hon. Secretary, Messrs. Sydney Perks, F.S.A., H. D. Searles-Wood, Stanley H. Hamp.

FELLOWSHIP DRAWINGS COMMITTEE.—The President, the Hon. Secretary, Messrs. E. P. Warren, Heaton Comyn, C. Lovett Gill.

THE ROYAL GOLD MEDAL COMMITTEE.—The President, Messrs. A. W. S. Cross, George Hubbard, H. D. Searles-Wood, C. Heathcote, the Hon. Secretary, Mr. J. A. Gotch, Sir Edwin L. Lutyens, R.A., Sir Reginald Blomfield, R.A., Messrs. Francis Jones, C. B. Flockton, Heaton Comyn, T. R. Milburn, E. P. Warren.

BOARD OF ARCHITECTURAL EDUCATION.—The President, the Hon. Secretary, Messrs. H. D. Searles-Wood, George Hubbard, A. W. S. Cross, Professor S. D. Adshead, Messrs. Robert Atkinson, H. Chalton Bradshaw, Walter Cave, E. Guy Dawber, Professor A. C. Dickie, Messrs. H. M. Fletcher, W. Curtis-Green, Sir Robert S. Lorimer, A.R.A., Professor Beresford Pite, Mr. W. S. Purchon, Professor A. E. Richardson, Professor C. H. Reilly, O.B.E., Messrs. Alan E. Munby, H. Austen Hall, E. Stanley Hall.

TOWN PLANNING COMMITTEE.—The President, the Hon. Secretary, Professor Patrick Abercrombie, M.A., Professor S. D. Adshead, M.A., Mr. Robert Atkinson, Major Harry Barnes, M.P., Sir Reginald Blomfield, R.A., Messrs. Walter Cave, Arthur Crow, T. Raffles Davison, W. R. Davidge, F. M. Elgood, Edwin T. Hall, W. Haywood, Col. R. C. Hellard, C.B., Sir Herbert Jekyll, Messrs. H. V. Lanchester, H. J. Leaning, Professor W. R. Lethaby, Sir Edwin Lutyens, R.A., Mr. D. Barclay Niven, Professor Beresford Pite, M.A., Messrs. C. H. B. Quennell, W. E. Riley, R.B.A., W. H. Seth Smith, Herbert Shepherd, John W. Simpson, Raymond Unwin, Sir Aston Webb, P.R.A.

THE COMPETITIONS COMMITTEE.—The President, the Hon. Secretary, Professor Patrick Abercrombie, M.A., Messrs. W. H. Ansell, M.C., Henry V. Ashley, G. Leonard Elkington, L. Rome Guthrie, E. Vincent Harris, H. V. Lanchester, F. Winton Newman, William A. Pite, T. Taliesin Rees, J. Douglas Scott, Septimus Warwick, Herbert A. Welch, W. G. Wilson.

THE R.E. MESS MEMORIAL COMMITTEE.—Messrs. Horace Cubitt, Gilbert Fraser, T. F. W. Grant, M.C., Maurice E. Webb, D.S.O., M.C.

THE LONDON BUILDING ACTS COMMITTEE.—The President, the Hon. Secretary, Professor S. D. Adshead, Messrs. Walter Cave, Horace Cubitt, W. R. Davidge, C. A. Daubney, E. Guy Dawber, F.S.A., Matt. Dawson, Sir Banister Fletcher, Messrs. H. Austen Hall, George Hubbard, F.S.A., J. J. Joass, Delissa Joseph, Sydney Parks, F.S.A., H. D. Searles-Wood, Digby, L. Solomon, B.Sc., Sir Henry Tanner, C.B., I.S.O.

THE REGISTRATION COMMITTEE.—The President, Messrs. H. D. Searles-Wood, George Hubbard, A. W. S. Cross, M.A., C. Heathcote, the Hon. Secretary, Messrs. W. Gillbee Scott, C. B. Flockton, Sydney Perks, F.S.A., Delissa Joseph, Herbert Shepherd, W. G. Hunt, H. G. Fisher, Major Harry Barnes, M.P., Messrs. Arthur Welford, W. E. Riley, Heaton Comyn, W. R. Davidge, T. R. Milburn, A. O. Collard, Frank Woodward, G. Topham Forrest, Percival M. Fraser, L. A. Culliford, C. Lovett Gill, W. W. Scott-Moncrieff.

THE CHARTER AND BY-LAWS COMMITTEE.—The President, Messrs. A. W. S. Cross, M.A., C. Heathcote, George Hubbard, H. D. Searles-Wood, the Hon. Secretary, Messrs. W. H. Ashford, Max Clarke, Sydney Perks, F.S.A., Herbert Shepherd, J. A. Swan.

THE SESSIONAL PAPERS COMMITTEE.—The President, the Hon. Secretary, Messrs. Martin S. Briggs, Walter Cave.

THE ANNUAL DINNER COMMITTEE.—The President, the Hon. Secretary, Messrs. Walter Cave, William Woodward.

ADDITIONAL MEMBERS TO THE FOUR STANDING COMMITTEES.

ART STANDING COMMITTEE.—Messrs. F. R. Hiorns, W. R. Davidge, C. Lovett Gill, H. P. Burke Downing, Walter Tapper.

LITERATURE STANDING COMMITTEE.—Messrs. J. A. Gotch, Harry Sirr, Basil Oliver, L. A. Culliford, W. H. Ward.

PRACTICE STANDING COMMITTEE.—Messrs. T. R. Milburn, Percival M. Fraser, Francis Jones, Harry Teather, W. Henry White.

SCIENCE STANDING COMMITTEE.—Messrs. J. Ernest Franck, S. B. Russell, E. Fiander Etchells, J. E. Dixon-Spain, A. W. Moore.

Competitions

COMPETITION FOR REBUILDING NEW-MARKET HOTEL, BURY.

The following copy of a notice has been issued by the Council of the Institute:—"Members and Licentiatees of the Royal Institute of British Architects must not take part in the above competition because the conditions are not in accordance with the published Regulations of the Royal Institute for Architectural Competitions."

CHELSEA HOSPITAL FOR WOMEN.

The Council of the Chelsea Hospital for Women propose to invite not more than twelve Architects to submit Designs, in Competition, for their proposed Nurses' Home (some 100 bedrooms, etc.), to be erected in the Hospital grounds.

Premiums of £150, £100 and £50 will be paid to the Authors of the Designs placed 1st, 2nd and 3rd respectively. The Council have appointed Mr. Henry V. Ashley, F.R.I.B.A., to draw up the Conditions and Instructions of the Competition, and to adjudicate thereon.

Architects willing to compete are requested to send in their names to the Secretary on or before September 16 1922 together with their qualifications.

By Order of the Council,

HERBERT H. JENNINGS,
Secretary.

Arthur Street,
Chelsea, S.W.3.

COLOMBO TOWN HALL AND MUNICIPAL OFFICES COMPETITION.

The Secretary of the Institute has received a cable from the Municipality of Colombo to the effect that the above Competition is restricted to architects practising in the East.

COMPETITIONS OPEN.

Southend-on-Sea Secondary School.
Lytham Public Hall and Baths.

The conditions and other documents relating to the above competitions may be consulted in the Library.

The Examinations

INTERMEDIATE.

The Intermediate Examination, qualifying for registration as Student, R.I.B.A., was held in London from 9 to 15 June. Of the 111 candidates who presented themselves 26 passed and 85 were relegated. The successful candidates were as follows, the names being given in order of merit as placed by the Examiners:—

- WHITE: Leonard William Thornton [P. 1920], 18, Mayfield Street, Hull.
 McKEWAN: Arthur Malcolm [P. 1922], 27, Somerset Road, Handsworth Wood, Birmingham.
 VINE: Ronald Owen [P. 1920], 7, Whymark Avenue, Wood Green, N.22.
 *MONTAGU: Adrian, 7, Chadwell Street, Myddleton Square, E.C.1.
 COATES: Harold John [P. 1920], c/o W. E. Watson, Esq., 9, Mitre Court Chambers, Temple, E.C.4.
 FILLMORE: Cecil Ernest Millard [P. 1922], Newhaven, Hollyhedge Road, West Bromwich.
 McMANUS: Sydney Charles [P. 1922], 675, Wandsworth Road, Clapham, S.W.8.
 GRAY: Charles Clare [P. 1920], 81, Sutton Crescent, Walsall.
 HODGES: Alfred Walter [P. 1920], 10, Fortescue Road, St. Thomas, Exeter.
 WILDE: George [P. 1920], 98, Brewerton Road, Oldham.
 CUTHBERTSON: Dale [P. 1920], 2, Grisedale Street, High Westwood, Hamsterley Colliery, co. Durham.
 FELGATE: Eric George [P. 1914], 11, Victory Road, Ilkley.
 FORD: Walter Henry [P. 1920], Fairford, 28, St. Mary's Grove, Chiswick, W.4.
 BYERS: John [P. 1921], Dockray Bank, Wigton, Cumberland.
 GOUGH: Gerald Charles Purcell [P. 1922], Sunny Mead, 11 Sands Road, Paignton, S. Devon.
 PRANGNELL: Cecil Thomas [P. 1921], 43, Edmund Street, Camberwell, S.E.5.
 BRAGG: George John [P. 1920], 21, Clements Road, East Ham, E.6.
 COWSER: Benjamin [P. 1921], 32, Agincourt Avenue, Belfast.
 GEESON: Alfred Godwin [P. 1921], 27, Park View, Stapleford, Notts.
 GREEN: Ralston Tilsley [P. 1917], 37, Manor Park, Redland, Bristol.
 BARNLEY: Geoffrey Reynolds [P. 1919], 2, Eastholm, Letchworth, Herts.
 CARTER: Richard Jeffery [P. 1919], 37, Hamilton Road, Reading.
 ECCLESTONE: Arthur William [P. 1918], 34, Victoria Road, Great Yarmouth.
 ENGLAND: Norman Roderick [P. 1918], 24, Bromley Road, St. Annes-on-the-Sea, Lancs.
 RICHARD: John Cyril [P. 1918], 71, Whitechurch Road, Cardiff.
 TAYLER: Kenneth Seaward [P. 1920], Ivycourt, Brookside, Chesterfield.

THE FINAL AND SPECIAL.

The Final and Special Examinations, qualifying for candidature as Associate, R.I.B.A., were held in London from 22 to 29 June. Of the 33 candidates admitted, 17 passed the entire examination, 2 passed Part I. (having elected, in accordance with the regulations, to take the examination in two parts), and the remaining 14 were relegated. The successful candidates are as follows:—

- BAILLIE: William [Special], 78, Park Drive S., Whiteinch, Glasgow.

- BALL: William Arthur Cessford [Special], 73, St. James's Road, Croydon.
 BUTLER: Bertram [S. 1922], 31, Priory Street, Dudley.
 GILDER: Framroz Nowroji [S. 1920], Indian Students' Hostel, Keppel Street, W.C.1.
 GUNSTON: Edward Leslie [S. 1917], "Alpenrose," Kidmore, Reading.
 HOFER: Max Richard [S. 1911], 68, Cambridge Terrace, W.2.
 HUGHES: Eleanor Katherine Dorothy [S. 1921], 28, Moreton Street, S.W.1.
 JENSON: Alexander George [S. 1920], 20, Carpenter Road, Edgbaston, Birmingham.
 LEVERKUS: Gertrude Wilhelmine Margaret [S. 1920], 22, Gayton Road, Harrow-on-the-Hill.
 NEWHAM: William Benjamin Turner [Special], c/o Messrs. Gorch & Saunders, Bank Chambers, Kettering.
 *PETROVITCH: Douchan Slobodan, 35, Bedford Square, W.C.1.
 REID: Alexander Simpson [S. 1921], 221, Clifton Road, Aberdeen.
 RICHARDS: Francis Augustus [Special], 60, Tufton Street, Westminster, S.W.1.
 RYLE: Winifred [S. 1921], 16, Gordon Square, W.C.1.
 SAWYER: Frederick John [S. 1895], Nesscliff, High Street, Addlestone, Surrey.
 SUGDEN: Howard Davy [S. 1919], "The Heath," 2, Holford Road, Hampstead, N.W.3.
 WILLIAMS: Albert Ernest [Special], 80, Albert Street, Camden Town, N.W.
 ALLCORN: William John [S. 1913], The Pinnacles, Shipbourne, Tonbridge, Kent (Passed in Part I.).
 HINES: Edward George [S. 1920], Stockwood Crescent, Luton (Passed in Part I.).

The candidates marked * are not British subjects, but have taken the examinations for the purpose of obtaining certificates to that effect.

The Board have recommended that the Ashpitel Prize be awarded to Mr. A. S. Reid, of Aberdeen, he being the candidate who has most highly distinguished himself in the Final Examination, also that Mr. Reid be awarded the Thesis mark of distinction.

THE SPECIAL WAR EXAMINATION.

The Special War Examination (for students whose studies had been interrupted by the war) was held in London and Manchester from 3 to 7 July. Of the 215 candidates admitted, 131 passed and 85 were relegated. The successful students are as follows:—

- ALLEN: Charles William, 116, Mansfield Road, Nottingham.
 AUSTIN: Leslie Magnus, A.R.C.A., Royal College of Art, S. Kensington, S.W.
 BACKWAY: Gerald Henry, "Torridge Mount," Bideford, Devonshire.
 BALL: Walter Frederick, c/o Architectural Association, 34 and 35, Bedford Square, W.C.
 BANKART: Hugh Charles, 25, Parkhill Road, Hampstead, N.W.3.
 BARNARD: Charles Downing, 188, High Road, Leyton, E.11.
 BATHURST: Leslie John, 50, Woodside Road, Bowes Park, N.22.
 BUYSMAN: Cornelius James Alexander Kelder, 165, South Croxted Road, Dulwich, S.E.21.
 BEAUFOY: Samuel Leslie George, 163, Tufnell Park Road, Holloway, N.7.
 BEESTON: Charles Nicholson, 206B, Adelaide Road, N.W.3.
 BEESTON: Wilfred, 92, Falkner Street, Liverpool.
 BINGE: Joseph Wallace, M.C., The Oaklands, Acacia Grove, New Malden.

JOURNAL OF THE ROYAL INSTITUTE OF BRITISH ARCHITECTS

- BIRD : Eric Leslie, 34, Bedford Square, W.C.1.
 BLAKELEY : Tom, 28, Orchard Street, Savile Town, Dewsbury.
 BOOKER : Alfred Vincent, 3, Montern Road, Forest Hill, S.E.23.
 BOX : Harry Ewart, 54, Holland Road, Maidstone.
 BRAMWELL : John, 21, Upper Duke Street, Rodney Street, Liverpool.
 BRIARS : Reginald, "Hanover House," Tennyson Road, Luton.
 BROADBENT : John Stewart, 36, Bruce Road, Bow, E.3.
 BROTHERS : Colin Stanley, 49, Whitechapel, Liverpool.
 BROWN : Walter, Architectural Association, 35, Bedford Square, W.C.1.
 CALEY : Walter Herbert, c/o Architectural Association, 34, Bedford Square, W.C.1.
 CARTER : George Bertram, 24, Craighton Road, Eltham, S.E.9.
 CARTWRIGHT : Wilfred, 20, Cambridge Street, Loughborough.
 CHISHOLM : Alexander MacLeod, 13, Euston Grove, Birkenhead.
 CLACK : John, 104, Victoria Street, Westminster, S.W.1.
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CHURCH OF ST. MINAS, HOROMOS. (EIGHTH OR NINTH CENTURY)
From a watercolour drawing by A. Fetvadjian

An Outline History of Armenian Architecture

By A. FETVADJIAN

(Condensed from notes in French by W. R. Lethaby)

ARMENIA, as ancient records show, has been known by that name for about 2,500 years. The country is a high plateau to the south of the Black Sea and the chain of the Caucasus; the frontiers extend to the Caspian on the east and to the north of Mesopotamia on the south. The inhabitants are a *mélange* of peoples having different affinities. The most ancient among them, as we know from cuneiform inscriptions, had their centre of culture in the country around Lake Van. More than fifty of these inscriptions demonstrate the origin in Armenia of the Hittites. Other inscriptions of the conquering Chaldeo-Assyrians named the high Armenian plain URARTU; the Assyrians called it the Land of Nahiri (Flowers). An inscription of Assur-Nasir-Pal mentions strong towns surrounded by three rings of walls.

About eleven centuries B.C. a people which inhabited Macedonia and Thrace, being pushed out by invaders from the north, crossed to Asia. In time, traversing Asia Minor and combining with the native peoples, some of them ultimately entered Armenia, thus bring-

ing in new blood from the west. This people, supposed to be Phrygian, or related to the Phrygians, brought to the Orient a vivifying and renewing element, and they naturally gained the ascendancy over the old indigenous inhabitants. It is from this time that the country of the high plateau came to be called Armenia from and by the new people. It is a remarkable fact and very characteristic that all the words in the Armenian language which express *war, force, soldier*, etc., are Aryan, in contrast to the words for *religion, worship, culture, metals, arts, commerce* and *domestic objects*, which come from the older stock. I believe that when a time of peace allows of excavations by the modern methods of research that we shall arrive at results which will be revolutionary in the archaeology of the near Orient.

Whenever I stop before the bas-reliefs of the Assyrian palaces in the British Museum and examine the processions of those going to slavery and to the great constructive works I wonder whether the works of art themselves may not be largely due to Armenian

genius. An image of a god Chaldi is mentioned in the inscriptions as having been taken away from Armenia by Sargon. Study of the languages of the Near East shows that Armenian is an Indo-Persian variety related to Sanscrit and Zend—more particularly to the latter. In Armenian story the legendary founder of native culture came from Babylonia.

It is not exactly known by what means Armenia, which had for centuries been ruled by feudal princes independent of one another, was reconstructed as a kingdom under a Parthian dynasty known as the Armenian Arsacides. But from about 150 B.C. history becomes less legendary. The first monarch, Vagars-hag I, reorganised the state in a similar way to that in which Arsaces I, his elder brother, had metamorphosed the Persia of the Achemenes.

At this time several religions existed side by side, and all were tolerated, but a preference was given to the gods of Greece for political reasons. About forty years later Artashes the Conqueror, grandson of Vagars-hag I, returning from a successful military expedition in Asia Minor, brought back as trophies images of Greek gods to place in his capital, ARMAVIR. These were statues of Artemis, Herakles and Apollo, and they were received by the high priests, who set them up at ARMAVIR (Moses of Khorene). Artashes brought also images of Olympian Zeus, Athene, Hephaistos, and Aphrodite, and these were placed in the stronghold ANI. The king, Tigranes II (89-55 B.C.), assigned places for the cult of these images of Greek gods at ANI, and the native divinities which resembled them the most were placed with them. Thus Zeus was placed in the temple at ANI consecrated to Ahura-mazd, the father of the gods. Athene found a home at TULN in a temple of Nana; Artemis was put in the temple of Anahit at ERIZA; and to Aphrodite was assigned another temple at ASHTISHAT in the house of the goddess Astghik. It is said that priests were also brought to Armenia.

Why, it may be asked, did this Greek cult arise in Armenia if it already had its own idol images and architecture? Further, after the importation of Greek images and priests, did the Armenians construct their religious edifices in a Greek manner? As no vestiges have been found, we must suppose that the temples remained of a native character. Up to the present the only evidence regarding art under the Hellenophile kings is the beautiful head of the Greek goddess in the British Museum found at Sadakh. On the acceptance of Christianity (A.D. 314) the products of Hellenic art were so thoroughly destroyed that hardly a trace has survived.*

It is evident that before the time of the dynasty of the Parthian Arsacides there existed in Armenia a polytheism which required temples and images. No

material evidence of these has been found, but the literary evidence points to the existence of temples from an early period. The hierarchy at that time were members of the reigning families, and under the Arsacides this custom was resumed. In A.D. 78 the son of the king was high priest in the temple of Aramazd at ANI. Lands and villages were assigned for the service of the idols, and these at a later time were transferred to the church.

I must mention the existence of an edifice of modest dimensions but of pure Roman style. This was probably erected for the pantheistic idol cult fashionable in the days of the Arsacides, and it is said to have been constructed by the King Tiridat as a summer residence for his sister Khosrovitoukht. The ruin of this building is about 25 miles from ERIVAN, and its true nature has not yet been established. I suppose it must have been built by Roman architects for Tiridat and probably for the pagan cult of the Græco-Roman gods. This building and the bronze head in the British Museum are documents in agreement with the testimony of the chronicles.*

Armenia was a mixing land of various races and creeds. The land of the high plateau was overturned many times and as many times reformed again. In the pre-Christian period a number of beliefs existed side by side in mutual toleration. Certain ritual forms observed even to-day in the Armenian Church seem to be survivals of old pagan customs, and many superstitious practices and beliefs also continue to exist, passed on from days of human sacrifice, of the adoration of sun, stars, fire, water, and trees. Traces of the noble and intelligent Mazdeism also seem to have persisted.

Fourth and Fifth Century.—Christianity was proclaimed the religion of the state by Tiridat in the fourth century. This became a cause of further separation between Armenians and Persians, ancient neighbours as they were. Any alliance with Rome on the part of Armenia was a cause of difference between the two nations, although they were in large part of a common Aryan stock. It is probable that long after the proclamation of the faith of Christ that the adepts of the Mazdeist belief and the worshippers of the sun continued, if in secret, the practice of their cults. These naturally sympathised with their Sassanian co-religionists. The Shapurs, Khosroes, Varahrams, etc., did not overlook this accord, this fraternity in Jesus, between Armenia and Byzantium, the hereditary enemy of Persia.

The chronicles, which have abundant information in regard to the pagan period in Armenia, say little about the changes and reforms consequent on the acceptance

* For some details of this building see Strzygowski's volumes on Armenian architecture. In the British Museum is a fragment of a debased Hellenistic style which is said to be from the Palace of Tiridates (W. R. L.).

* See note at end.

of Christianity. They only tell in general terms that St. Gregory the Illuminator, assisted by King Tiridat, had the temples (mechians) and the altars demolished and the idols annihilated. I suppose that this was a *Christus Imperat* movement similar to outbreaks in the Western world.

The cordial relations of the Armenians with the great Christian Byzantine power angered the Persians still more. Christian Armenia did not inspire the confidence of Sassanian Persians; even after the Council of Chalcedon (the decisions of which the Armenians rejected, remaining faithful to the Creed of Nicea), when it was impossible to be in accord with Byzantium against the East, suspicions were continued. However, Armenia, even to avert ruin, would not alter her faith. Her Church remained in alliance with the Syrians and the Copts, who were not military powers. The Syrians were zealous in the propagation of the faith, and the Armenian churches follow the Syrian rite and the Gospels are read in that language. The masses of the people two centuries after the proclamation of the Gospel had not fully abandoned their old pagan beliefs, and they awoke to the light of the new faith only after the books were translated and sermons were given in their own language, which by its precision is an evidence of the intellectuality of the people. They now related the Christian ethic with those of their old religions, seeing that Jesus did not abolish the law but fulfilled it. The leaders of the Church understood the importance of the common tongue in completing the revolution. Armenia then fights a great battle in the name of its faith at AVARAIR in A.D. 454 and repulses the pretensions of the Sassanians who try to tear them away from their alliance in Jesus Christ with Western nations.

The Sixth Century, &c.—Among my studies I have two watercolours which are faithful portraits of the ruins of the churches of EREROUK and TEKOR. The former, which I visited in 1906, remains as the drawing shows, but TEKOR, which I drew still earlier, was struck by lightning in 1912, after 1,500 years of existence, during several centuries of which it was abandoned.

These two monuments are nearly identical in plan, details and technique, and also in the sculpture of their façades (the interiors are bare). They are examples of a charming archaism, and they are generally supposed to be the works of masters who were apprenticed to Syrian architects. The conjecture is not improbable, seeing the cordial ecclesiastical relations between Armenia and Syria at this time. I think, however, that the art of these two monuments is a step in an evolution of which the genesis remains unknown. However, at this the flowering time of evangelised Armenia the neophytes were still under the charm of Syrian propaganda, although the relations were at this time not very recent.

Notice in the drawings of these churches the engaged columns which directly support the springers of

the arches; the plinth of expanding courses and the elliptical cupola. The cupola, enveloped in masonry externally, shows lack of experience, and the low tambour which supports it is also remarkable, as later this feature was developed to an extraordinary degree. Consider, again, whether these characteristics are best explained by apprenticeship to Syria.

There are other examples of contemporary churches, although they are not so important. For example, the Church of St. John at PURAKAN and the Sourb-Nshan at KASSAKH. The more ancient churches are larger and more sumptuous than later ones, and this fact corresponds to the relative prosperity of the country at an early time than later. It should be remembered that the architects of the time usually only interpreted the thought of the clergy or the will of a prince. This fact and an examination of the methods and technique of building suggest that the actual architects who built the churches of the sixth century were native masters.

In Armenia, near ERIVAN, is the church of AVAN, dated 557, which has a central cupola supported on eight round arches. Possibly it also had four small cupolas at the angles. There is also a little basilica at KASSAKH which seems very ancient. Without doubt it is of the same age as a church at EGHIVARD, which dates from 574, but the latter is larger.

From the hour when Armenia became ready to say its word in Christian architecture its churches have a specific type; they are in no sense imitative works. These monuments, constructed where and when the word of a prince made law which was executed without hesitation, reveal an artistic taste and a powerful technique superior to those of Syrian masters, from whom it is suggested that the Armenians learnt their art. Examine the works closely and you will allow that the native artist had an innate sense of beauty and was perhaps the superior of the masters who built the churches of Tourmanin, Rouehiah, Bakria and many others in Syria.

In Syria there was an immense heritage of artistic tradition—Egyptian, Phœnician, Greek, and Roman—and at the flowering time of Christian art the land was still covered with examples of ancient architecture. Syrian masters were in contact with artists of many countries; the architects of TEKOR and EREROUK had not these advantages and deserve the greater praise.

Nothing, however, prevents us from supposing that the Armenian architects, without themselves having been in Syria, have borrowed ideas and translated them according to their proper genius. Indeed, without the genius of the Armenian people and their long experience all suggestion would have been in vain. The art of these churches of the sixth century is an Armenian art before all and after all.

The Armenian hierarchy never from the time of the pagan priests abdicated their autonomy. They formed

an important organisation by the side of other authorities, which obstinately repelled all interference with its institutions. Feudal Armenia, in co-operation with this power, carried on the war of Avarair against the Sassanides in A.D. 452, and later the feudal power and the Church signed the treaty with the Khalif Mohaviah in 657. This agreement gives us a clear view of the political situation in the seventh century. It is evident that, notwithstanding their great superiority in numbers to the Armenians, the Arab forces of the Khalif thought it wiser, having experienced the terrible winters of the Armenian mountains, to come to an agreement with the numerous Armenian lords in their mountain fortresses. Such fighting was very different from their easy conquests in warm countries. Relinquishing the idea of conquest by violence, the Arabs followed the policy of making an alliance with the Armenian lords against the principal enemy, Byzantium, with whom both had a quarrel. The quasi-political vassalage of Armenia which this entailed does not seem to have been very irksome until the end of the seventh century, and a number of *chefs d'œuvre* of architecture were erected during this time.

The monuments of this second period of Christian architecture were basilicas, sometimes having a cupola; or constructions on a central plan, always surmounted by a cupola; or churches of tri-apsidal plan, of which Stuzygowski attributes the invention to Armenians; and, finally, churches in the form of a cross. The following are churches of this period:—

St. Gregory at DWIN (606-611), church at AVAN (beginning of the century), two churches at VAGHARSHAPAT (618 and 630), the old church of the citadel at ANI (622), the cathedral of BAGARAN (631), St. John at BAGARAN (631-639), St. Anania at ALAMAN (637), the cathedral of MREN (638-640) are of the first half of the seventh century and before the Arab invasion.

Notwithstanding the disturbances the Arab invasion caused, Armenia, still rich and prosperous, maintained its culture, art, and industry. The impulse towards church construction which appeared at the beginning of the seventh century did not slacken until its end. Armenian masters, now free from external influences and encouraged at home, strove to create monuments captivating in originality although modest in dimensions. While occupied in withstanding the Arabs on one hand, and repelling the foolish excursions on the other of the Byzantine Empire, which sought to bring back Armenia to the Confession of Chalcedon, monuments of architecture without precedent were erected.

The church of Our Lady of MASTARA, a construction on a quatrefoil plan (650); the churches of the great and little ARTIKS (650); the church of ADIAMAN (650-660); St. Stephen at AKRAK, similar to the churches at MASTARA and the two ARTIKS; the large church of AROUJ (TALISH); the great church of EGHVARD; Our

Lady at ASHTARAK; the Holy Apostles at AGORI; St. Stephen of MAGHART; the fine Our Lady of TALIN, on a tri-apsidal plan (690); the lesser church at TALIN, of cruciform plan and surmounted by a cupola; Our Lady of PETGHNI; St. John at BRNAKOT, in Siunik; the church at NAKHDJAVAN—these remarkable churches were all created between A.D. 650 and 700.

Armenia from ancient times had been a prosperous land. "They of the house of Togarmah traded for thy wares with horses and war-horses and mules" (Ezekiel xxvii. 14; see also Herodotus v. 49, i. 194). This prosperity, vaunted alike by native and foreign chroniclers, had its principal source in the gifts of nature. But these gifts would have been of little service without the peculiar genius of the people—a people which by its proper nature loved work and sought culture. Arab historians who since the invasion of Islam frequented the country bear witness to an efflorescence hardly elsewhere equalled in the Near East at the same period. Armenia, carefully cultivated, "produced everything in abundance." DOVIN, the capital at this time, taken and sacked by the Arabs in 642, was an important town of industry and commerce, exchanging merchandise with India, Persia, and some Roman lands. ERZROUM was a town of splendour; KARS was an animated market; and METILENE, BARDA, DERBEND were other prosperous towns.

Trade routes crossed the country from the Black Sea and TREBEZONDE in one direction, and from the shores of the Caspian in the other, towards Mesopotamia and Iran. Masters of the soil and successful in commerce, the Armenians possessed a prosperous country before the blight of foreign domination became fully manifest.

As artists the Armenians had never felt megalomania. Their aesthetic sense was content within the limits of humble proportions. Entire buildings might be placed in the great galleries of modern museums. The work of each district had its own distinct character. A church in SHIRAK cannot be confounded with one of GOUGARK or of ARTZAKH. Each master was a creator, not a copyist, varying ever by the force of a true originality. The architects were particularly ingenious in adapting cupolas to all kinds of plans. They harmonised art with convenience and with reality.

In the eighth century Armenia, by reason of its natural resources, became the most important of the trans-Caucasian lands under the Kaliphs of the Crescent. Situated between the two great powers, the Kaliphate and the Byzantine Empire, the country had to defend itself even while it did not cease to satisfy its zest for architecture. Under the completer hegemony of the Arabs in the near Orient Syria ceased to hold the place it occupied before in relation to Armenia.

The Arabs, heirs of the Sassanians in the East, Byzantium, heir to Rome in the West, were both determined to prevent Armenia constituting itself a separate



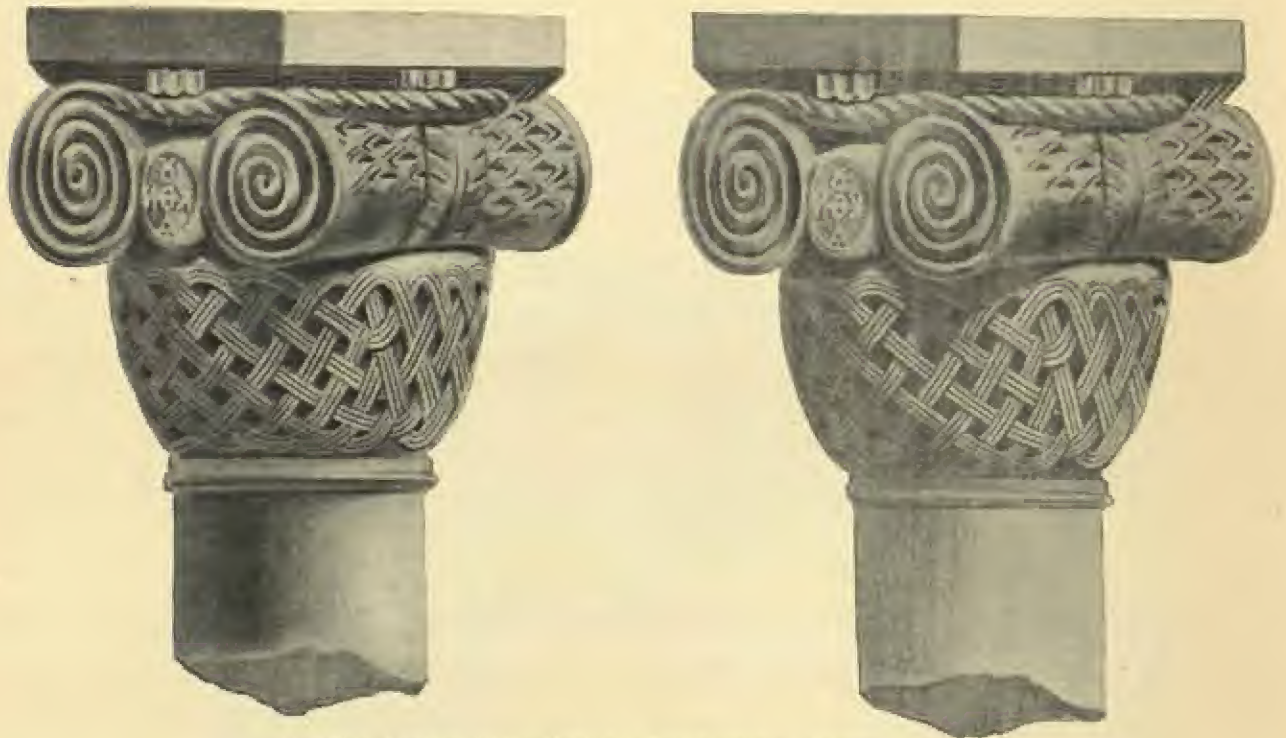
THE CHURCH OF THE HOLY APOSTLES, ANI. (TENTH-ELEVENTH CENTURIES)
From a watercolour drawing by A. Fetvadjian



CHURCH ON THE CITADEL, ANI, FROM THE SOUTH-WEST. (ELEVENTH CENTURY)
From a watercolour drawing by A. Fetvadjian



SMALL CIRCULAR WINDOW, CHURCH OF ST. JOHN (ACHTCHKABERD), ANI. TWELFTH CENTURY
From a drawing by A. Fetvadjian



CAPITALS, CHURCH OF ST. GREGORY, ZOUARTHNOTZ. (SEVENTH CENTURY)
From a drawing by A. Fetvadjian

sovereignty. Byzantium, fussy but inefficient, only irritated the Armenians, including her own allies amongst them, when she attempted to speak as master and insisted on the acceptance of the Confession of Chalcedon. Further, while incapable of protecting them from the Arabs, it tried to drag them into a conflict which they could not guide to a successful end. By promises Byzantium bought the adhesion of some of the princely families—the Mamikonians, the Amatounis, the Kamssarakans, etc., etc. Even some of the Bacratides, vexed by Islam, were drawn for a time to abandon their subjects and espouse the cause of the Byzantine Empire. The most influential of the feudal princes, helped alternately by the two strong neighbours of their country, tried in turn to secure their own dominion, thus every day dragging Armenia with themselves to ruin. Only Byzantium and the Kaliphate profited by these internal feuds: the one failed to respect the treaty signed by Moavia, and the other found pretexts for military incursions into Armenian territory. Every Armenian who turned from the Arabs to the Byzantines was well received and treated at first as one of themselves, but he was soon disenchanted, especially with the requirement that he should change to the Orthodox confession of faith. Some returned, but many princes, nobles and soldiers removed permanently to the Byzantine Empire. This current of Armenian emigration into the empire may very probably have influenced later Byzantine architecture. On the other hand, there is less likelihood of influence in the contrary direction. Armenia, as intolerant as Byzantium on these questions of faith, chased all dissenting Armenians from the country in 719. It seems impossible, under these circumstances, to admit for the Armenians any admiration for the architecture of Byzantium.

The religious vexations from Byzantium, the arbitrary action of Islam, the stupid antagonism between the feudal princes of the land, left Armenia little leisure in the eighth and ninth centuries for advancing the traditions of art and culture. Nevertheless, this country of intelligent ancient races found a way. The princes, withdrawing to mountain fastnesses, gave to their architects a new field for their skill in constructing, in peace and solitude, churches and convents dedicated to the memory of their ancestors, where masses were celebrated for the souls of the departed.

A monument discovered during the excavations of 1910 at ANI was probably built during this century of desolation. A part of the beautiful church of OTZOUN is dated 718, and a part of that at BANAK belongs to the same century. Later, again, the Arabs returned to their earlier policy of practical alliance with the Armenians, and about the beginning of the tenth century the famous church of AKHTAMAR was built, by the architect Manouel, which was the crown of the efforts of this time. The same architect constructed the artificial port

on Lake Van. During the ninth and tenth centuries a large number of churches were built—the church and convent at NAREK, where Gregory Narekatzi became a novice and wrote his divine poem; the church of the Saviour at TARON; churches at ASHTARAK, MAZRA HORMOS, NORATOUZ, DARIOUNK, OUGHOUZLI, SOTH, MAKENATZOTZ, VANEVAN, SALNAPAT, SEVAN KEOTRAN (near Erivan), TARON (St. John Baptist), ISHKHAN, EÖSKH, KHAKHOU; the convent at SHOGHAG. These are marvels of variety of form and richness of decoration.

During the centuries architecture had several alternations of progress and stagnation responding to the vicissitudes of the life of the country in times of peace or pressure—always adapting itself to the resources at disposal. From the end of the sixth to the end of the thirteenth century there were four periods of decline and recovery.

Dynasty of the Bacratides in the Tenth and Eleventh Centuries.—This dynasty had its ancient source among the principal old feudal princes of Armenia. They were hereditary commanders-in-chief of the forces and able in war. The Arab Khaliphate, at that time in difficulties, was ready to be conciliatory, and the dynasty was free to devote its energy to internal culture. The architecture of the tenth and eleventh centuries has left us a large number of remarkable monuments. Among these are the metropolitan church of ANI (SHIRAK), a veritable museum of fine and original buildings; the group of churches at SANAHIN, with the convent buildings; the convent of HOROMOS, with a noble group of civil constructions round about; the splendid church of MAR-MASHEN; the convent of HAGBAD; the elegant group of five miniature churches at KHTZKONQ; the remarkable church of the Holy Apostles at KARS; the ornate church of Our Lady of BAGNAIR; the imposing ruined church of ARKINA; the severe KARMIR-VANK and distinguished church of GOUASHAVAN; the church of IRIND, with its central plan, and that of St. Elias, of the citadelle of ANI (which is identical in form and contemporary); the aristocratic church of BOJNI and the sober Our Lady of TZPNI; St. Stephen at VORODN; Our Lady of KHOTAKERATZ; the humble church of PRAVADZOR; the cathedral of KARINE; the architecture at GNTEVANK; and the church of HAVOUTZ-THAR in its superb position.

Notwithstanding the prosperity, relatively speaking, of this era, it was sought to observe in the buildings consecrated to religion modest proportions in accord with old traditions and Christian humility. In the interiors as well as on the exterior the walls of the churches are formed of wrought slabs in regular courses. As in more ancient constructions, I have never remarked in the buildings of the era of the Bacratides any trace of painting. Sculpture in slight relief frequently decorates the façades. The monuments of this epoch do not show motives borrowed from Arab art.

Eleventh and Twelfth Centuries.—The Bacratides were succeeded by the Zakarian dynasty in 1012. The artistic life of Armenia seems to have been little interrupted, although there were wars with the Byzantine Empire, and the Turks made their first appearance in Armenia in 1060. Architecture continued in a series of buildings which by their graceful originality and ingenuity of conception yielded nothing to the works of the preceding era. The national traditions in architecture and sculpture, consecrated by long custom and conforming to the ritual of the old Church, were conserved and consolidated. The Zakarians, grand strategians of the Georgian army—who at this time, under the Queen Tamar, had a semblance of ascendancy over old Armenia—gained evidently by their confession of the creed of Chalcedon and by the good will of Byzantium fixed in its traditionalism. The Zakarians made some attempts to bring back the Armenians to Byzantine orthodoxy, but this only irritated them the more. Those faithful to their creed and in hatred of all that was Byzantine would not be drawn away from the traditions of their national art. Works of this period are: The church of the Shepherds before the wall of Ani, of which I have a drawing; the churches of HOROMAIR, HAGHARDZIN, KOUSSA-VANK at Ani, KHOTA-VANK, KHATRA-VANK, the Holy Cross at ZARINDJI; the church of the Convent of SHKHMOURAT and St. Gregory at TSEKH; the churches of COSHA-VANK, HARTZ-HANKIST at BANANTZ, GUEGHART (Airi-Vank), KOPAIR, BRAVATZOR and SAGHOTZOR (Sevortiatz); the Church of the Mother of God at SANAHINE, of SPITAKAVOR at Zendjirli, of the Convent of SRVÉGH, and of VAGHAHASS.

All these monuments, marked by artistic originality, are living documents for those who would complete their study of Christian art. Many other lesser works also remain of the twelfth century.

In the thirteenth century hundreds of monuments were sown over the land, and the style of these works shows great vitality and intelligence. At this time, although there was some political disquiet, Armenia worthily continued the culture of the seventh century. Then, while with one hand repelling invasion, the people built noble sacred monuments with the other. Now, still master of its own soil and rich by industry and commerce, Armenia continued to build during the whole thirteenth century, compelled by a sentiment of piety. At this time, the fourth renaissance of architecture, the following buildings were erected: The church of St. Gregory the Illuminator at Ani, the church of the Convent at HARIDJ, churches at TEGHER (Our Lady), OUSHI (St. Sergius), HOHANNA-VANK, SAGHMOSSA-VANK, DAMDJELOU (the Mother of God), ASTVADZKNAL, THEGHINIATZ, KHORANASHAT (our Lady), GANDZASAR (St. John Baptist), SOURB-NSHAN, SOURB-HAROUTUNE (Ketcharis), OSHAKAN (restored and spoilt), MANAZKERT, MARMET, MOGNI (restored and spoilt), DATI-VANK,

DJOUKHTAK-VANK, VAÏOTZ-TZOR, VADJAROU ARCHO-ARIDJ, HERHER, MEDZARANTZ, AMENAPRKITCH (Baya-zide), ANBERT, HOROMI-IEGUEGHETZI (Ani), DZAR (Our Lady), KARMIR-VANK, KOGHP, KOGHESS, HALI-DZOR (Datevi-Anapat), OUREK (Horka-Vank), HOGHOTZIM, KHANDZI, ICAHAD, KARASNITZ-VANK, IEGHISH-ARAKELO-VANK, LIANOSSE-VANK, KHATCHKA-VANK, SOURP-KIRAKI, THANAHATI-VANK, AGHERTZOU-VANK, ZANKI, DARBASS (Notre Dame), DEGHYZANOUTI-VANK, IEGHITIK, ARPA, PARISOS TCHRVSHITIK, SOULO, HAGBAT (Tour), MARTIRO-SKECH, KRK-POULAGH, MAIRAKAGHAK, TCHOROUT DZOR DZOR, MRTZOUNIS, KOLATAK, KANAKER, NORS, SHNHER, KARAGLOUKH, TOGHIS, SOURP-SION, ARZAKAN (Our Lady).

Many of these which I have been able to study in detail are usually well preserved. By their distinction, elegance and decoration, as well as by careful construction, they would excite the admiration of every artist. A characteristic of the works of this period is found in the narthexes of the churches. This novelty, begun at HOROMOS in the day of the Bacratide King Hovannes-Simbat in the eleventh century, now became general. In these are numerous monolithic columns, with bold, even vehement, capitals; the ceilings were covered with fine carvings, and the doors are magnificent and the windows fantastic. Memorial tablets mark the sepulture there of persons of distinction, especially benefactors to the church. These halls, called Jamatoun or Gavite, are mausoleums provided to satisfy the pious desire of those who wished to be buried in the shadow of the church. The old Armenian Church did not permit burial in the sanctuary itself, and the Jamatouns are supposed by some students to have been devised for this purpose. The charm of these narthexes was so evident that many churches earlier than the time when they became common had them added to the original fabrics—sometimes in more or less awkward ways. Later again, they went out of fashion, and sometimes were removed, leaving only traces.

The thirteenth century was closed in inquietude. Architecture, after a century of enthusiastic support by patrons and work by the artists, moved towards its decadence in consequence of the failure of security. The fourteenth century was a time made dark by the apparition of Turco-Tartarian hordes, who, after striking down the Khaliphate, became more and more cruel and savage. Armenian chronicles of this time are full of horrible things and show that the whole country was under unnatural conditions; all culture and art became impossible. A group of princes and nobles sought refuge in Georgia, and others emigrated to the lands by the Black Sea and even to Poland. Some are said to have reached the West and Ireland; the last descendants of the old princely lines sought refuge in regions difficult of access (Siunik, Sassoun, Taurus), where they yet continue. The population survived



A FALLEN TOWER, ANI. ELEVENTH CENTURY
From a watercolour drawing by A. Fetvadjian

this cataclysm by a miracle, either within the country or in neighbouring lands, and continued the race only by desperate tenacity.

A few notes may be added on the general characteristics of Armenian architecture.

Carving.—The architecture of Armenia was essentially a stone art, and the decorations are in harmony with this basis. Sculpture thus held a prime importance both within and without. Ornamented surfaces are usually carved on what may be called a *champlevé* method which is both ancient and characteristic of all the schools of the near Orient. Such carved decoration was engraved, as it were, on the surface, which it covered like an embroidery, and the method seems peculiarly appropriate to the quality of the stone used. Many fragments found in excavations show the use of some animal and vegetable forms, as eagles, bulls, serpents, heads of angels, lions and rams, pomegranates and grapes. At times large surfaces, say 10 yards long by 6 high, are covered over with carpet-like patterns made up of polygonal and star-shaped slabs covered with intricate carving.

Walls.—The faces of walls are as perfectly fitted as modern parquets of oak; the filling is rubble, with much excellent mortar. The courses of the facings vary in height. Roofs are covered with wrought stone slabs.

Ceilings and Vaults.—The ceilings in the great narthexes built from the eleventh to the thirteenth

century are constructed of slabs laid horizontally with consummate skill. The naves of the churches are usually covered with tunnel vaults; these are built in sections, inclined at an angle. Vaults with spherical surfaces were commonly used in the seventh century, and other forms appear in the period from the ninth to the eleventh century.

The simple semicircular arch is not found in Armenia, although common in Byzantine art.

The *stilted arch* is the most usual form, and is common in all the epochs of Armenian art.

The *horseshoe* form of arch is current in the oldest buildings of Christian Armenia, as remarked by Texier and others.

The *pointed arch* exists only as an illusion obtained by a slight modification of the round arch at the crown.

A *segmental arch* is found in the west front of the Church of Our Lady at Bagnair, a *chef d'œuvre* of the tenth and eleventh centuries.

The *tunnel vault* is both ancient and common.

Ribbed vaults are also known.*

The flat ceilings were frequently highly decorated with carving. No examples of painted decoration have been found except some fragments of plaster at ANI.

Stalactite work suspended from ceilings and vaults sometimes covers the whole surface of a cupola. These

[* Mr. Fetvadjian tells me that vaults with diagonal ribs are found in work of the tenth century.—W. R. L.]

elements are worked out in variations which become veritable symphonies in stone. I believe that this mediæval type of decoration is an Armenian invention, and I have made a special study of this problem.

It is a characteristic of Armenian building art that arches were not usually decorated on the voussoirs, but rather on bands following their external lines. These carved bands are of astonishing variety.

The Crafts.—These were highly developed in Armenia. Dyeing was a great national industry, and from the famous red made at ARTASHAT, it was called "the town of red dye." Stuffs called Marzi of DOVIN were famous. Silks were embroidered in gold by the women, and this art still survives. Many examples of this art are to-day shown in Western museums under the names Turkish, Persian, or Arab. I hope some day to see these misdescriptions changed. Armenian carpets have been famous ever since this art appeared in the world. In the tribute paid by Armenia to the Arab Kaliph twenty carpets were included.

The craftsmen were highly skilled in making arms and as goldsmiths. Again, in Western museums I have seen many remarkable works from my country described as Turkish. The Turk a goldsmith indeed!

Leather working was also a highly developed craft, and leather prepared by the Armenian method was in request at Constantinople.

[The references to Greek statues of bronze brought to Armenia (p. 586) and their violent destruction are most interesting in regard to the fine head of Aphrodite in the British Museum found at Satala, now Sadakh (near the ancient Eriza). Both this head and the bronze hand found with it bear manifest evidence of violent destruction, and it is tempting to think that they may be parts of one of the actual Greek bronze statues mentioned by Moses of Khorene (Book II., ch. xiv.). From the time of the acquisition of the head it has been usual to date it as a fourth-century work. Vague doubts are expressed about the hand, mainly, I think, because the style of this may not seem so fine as that of the head. This hand would prove the figure to have been an Aphrodite of the Cnidian type, and hence again there is a tendency to question whether the head really is that of Aphrodite. Further, it is said that the head "reflects the style of Scopas rather than of Praxiteles," the author of the Aphrodite of Cnidus (Walter's *Select Bronzes*). All these remarks spring, I think, from the desire to sustain the fourth-century date. In the *Catalogue of Bronzes* it is allowed that "the hand, from its style and the condition of the bronze, appears to have belonged to this statue." It is added, however, "on these grounds it has been argued that the original was a copy of the Cnidian Aphrodite, but it is by no means certain that the head represents Aphrodite."

Now, I should at once question the fourth-century date of the head. To my eye and mind it is a second-century work in an Alexandrian style. The wide face and radiant yet disdainful expression are characteristic; so is the treatment of the hair with little — shaped locks on the forehead and small curls in front of the ears; so, again, is the simple circlet on the hair. Then the hand certainly belonged to the same figure as the head; its scale, the quality and thickness of the bronze, and the colour of the patina are all similar in both works. Finally, both had faults in the casting made good in the same way by thin inlaid squares of metal. Rayet, whose account of the head is the best, gives sufficient reasons showing from the head fragment itself that it belonged to an Aphrodite of the Cnidian type, and the association of the hand with it makes this identification quite certain. Rayet also states that the find spot was the site of the ancient cult of Anahit, who was an Oriental form of Aphrodite. All the evidence almost works out to a proof that our head belonged to one of the Greek bronze statues mentioned by Moses of Khorene. The bronze hand appears to show traces of gilding (?), and, according to Pliny, it seems that the statue of Anahit was reported to be of gold (Rayet).—W. R. L.]

The Library

A GENEROUS GIFT

The Institute Library has recently been presented with a large and valuable collection of books, which formed the architectural library of the late Mr. Henri Favarger [F.]. The thanks of the Institute are due to Mrs. Favarger, who has made this generous gift in memory of her late husband—a note to which effect will be inscribed on the book plate in each volume.

Among the 171 volumes may be mentioned Campbell's *Vitruvius Britannicus*, 3 folio volumes, 1731; Sir William Chambers' *Treatise on Civil Architecture*, 1st edition, 1759, an edition not previously in the Library; Inigo Jones' designs, published by William Kent 1835; Owen Jones' *Grammar of Ornament*, the large folio edition of 1835; Daniel Marot's *Oeuvres du Sieur D.M., Architecte de Guillaume III. Roy de la Grande Bretagne, contenant plusieurs pensées utiles aux Architectes, Peintres, Sculpteurs, Orfèvres, etc.*, Fol. Amsterdam 1712, a very scarce book, not in the Library; Prisse D'Avennes' *L'Art Arabe*, 3 folio volumes of plates and one of text, Paris 1877, a valuable work; Santi Bartoloni and Bellori's *Pictura Antiquæ Cryptarum Romanorum et Sepulchri Nasonum*, fo. Rome, 1791; Serlio's *Tutte l'Opere d'Architettura*, the edition published by Scamozzi at Venice in 1600; Viollet-le-Duc's *Dictionnaire raisonné de l'Architecture française*; Waring's *Masterpieces of Industrial Art and Sculpture at the International Exhibition of 1862*, three folio volumes with many plates in colour.

The Work of the Mediæval Builder*

By PROFESSOR G. BALDWIN BROWN, M.A. [*Hon. A.*]

LET me explain at the outset that what I have to say about mediæval architecture applies to that art as practised in the Middle Ages, when it was a natural language spoken and understood by all who laboured in stone and wood for the service of their fellows, and who made what was built and wrought beautiful for their delight.

The secondary, and almost accidental, interest attaching to mediæval work, when used as a model or an inspiration in the present day, is another matter altogether, and one which there is no need to touch. The fitness or unfitness of the Romanesque or the Gothic style for modern requirements is not the present concern. Within the last hundred years we have seen more than one revival of the architectural styles of bygone times, and there have been changes of taste through which the vogue of one decade has become something like the opprobrium of the next. One fact however is clear, it is not the style that really matters but the artistic qualities of the work, and these qualities may animate a classical building as well as one in the so-called "pointed" style. Let us glance at a few notable successes in architecture of our own times. Sir William Emerson's Victoria Memorial Hall at Calcutta, just opened in state by the Prince of Wales, is in the style of the English Renaissance, with certain Oriental features introduced. *The Times* has called it "one of the most beautiful buildings in the world." Severely classic are St. George's Hall, Liverpool, and Hamilton's Edinburgh High School, two of the notable architectural monuments of England and Scotland. Latin Romanesque, with its round arches and massive dignity, has inspired some of the most successful modern buildings in the United States. Greek Romanesque—or, if we prefer the term, Byzantine—is the language in which the late Mr. Bentley's commanding genius became articulate in the great Roman Catholic cathedral at Westminster. Lastly, in the Gothic style, Manchester has to show an acknowledged artistic gem, in which the most delicate refinements of beauty in detail enrich a general scheme of almost airy lightness and grace; and that this same late mediæval style of the Rylands Library can rise at the bidding of a modern to

monumental grandeur another great Lancashire city is essaying to prove.

These are all buildings well worthy to stand by the acknowledged masterpieces of the past, and they are thus worthy because they are great architecture. They are clear and compact in scheme; massed, and at the same time sub-divided, with a sense of the just balance between the qualities of breadth and complexity. Full of cunningly contrived adjustments, which yet for all the world look as if they had come naturally of themselves, they fulfil their human purposes useful and ideal, out of the useful conjuring forth the spirit of beauty, and wedding the ideal to the sane and practical. They are not great because they recall successfully the forms of this or that bygone century, or merely because they serve effectively a civic or religious purpose, nor, let us add, because they are designed on any pre-determined mathematical formula of the square or the rectangle—however dynamic.

This last sentence suggests a question that deserves a moment's attention. It is the question: How did the great architectural monuments of the past, especially those of the Middle Ages, come into being? How were they conceived, how was the idea of them embodied in material bulk? How was this material bulk shaped and organised, and clothed in detail and ornament?

Two theories which claim to furnish an answer may at the outset be noticed with a view to their elimination. One is the theory that architectural compositions are built up on arithmetical or geometric formulæ, invested often with the glamour of secrecy. There have always been minds attracted by the idea of mysteries handed down among initiates, the idea of weird collocations of numbers or geometrical forms that somehow control the springs of human action, and who would much rather believe that a conspicuous success has been achieved through some esoteric lore concealed from the profane than by the open methods of human invention, contrivance and judgment. It is a curious mental attitude, but so many affect it that there is always at hand a ready audience for ingenious theorists—some of whom may without injustice be called by the transatlantic term "cranks"—who believe that the æsthetic effect of a Greek temple or a Gothic façade depends on the

* A lecture delivered before the Manchester branch of the Institute of Builders, 10 February 1922.

systematic application of some formula of this kind. It needs hardly to be said that no two theorists have the same formula, but each believes passionately in his own. Now it is perfectly true that in the case of most architectural elevations that present the divisions and openings which no structure for human uses can be without, you can find approximate relations of size among the various parts, and by stretching a little here and compressing there, the spaces may be made to fit the Procrustes bed of the formula, the monuments where they will not work at all being set aside as exceptional. This is however very far from implying that the designer had any formula of the kind in his mind. It is an amusing pastime to try and make these mathematical schemes fit on a large-scale drawing of an elevation till the unhappy façade is covered with a sort of spider's web of intersecting lines, but the idea that these played any part in the original creation of the monument is an absolute fallacy, unworthy of serious attention. Most practising architects have been pelted recently with elaborate prospectuses of a costly work published at the expense of a Scandinavian government. Though the work be quite "on the square," a perusal of the prospectus is enough to raise in the mind the question whether any serious value can attach to the text.

There is another theory of architectural design which, as it is sometimes enunciated, is equally unpractical, but has the advantage over the other that it is based on an important truth. This is the theory that an architectural monument does not need to be designed, but, if you let it alone, will design itself. The architect is sometimes urged to think of nothing but his programme. All he has to do, he is told, is to realise all the purposes his building is to serve, and to provide for their carrying out in the most direct and effective manner possible. The dimensions, the divisions, the openings, will all strictly depend on the uses of the whole and of the different parts, and must be left just as they come of themselves. This will be architecture—anything added in the supposed interests of art is mere insincerity and waste.

This theory has the advantage over the other in that it is based on the fundamental truth of architectural design, namely, that in a structure meant to serve the needs of men and of societies, the proper satisfaction of these needs is of primary importance, and no building that fails to fulfil this

essential condition can be reckoned good architecture. The theory however fails in so far as it assumes that the needs of men are all of a material, measurable, kind. Such needs exist, and the demands they involve can be met by corresponding material arrangements. There are elements however in human nature that are not within the range of these everyday conditions. The spiritual in man demands expression, and in his environment man desires some symbol or suggestion of these stirrings and aspirations of the inner life. Great buildings which house communities, or in other ways minister to the corporate life of man, must, if they are to fulfil their highest purposes, express or adumbrate these, and in such a building the forms and spaces will always transcend the measure of mere utility. The mediæval town hall, or public structure of the kind—in position, in mass, in form, in significant detail—expressed the civic idea, and made its appeal to the present sense of a common life, to the memories of the past, and to resolves which the future was to see realised. So too the task of the mediæval monastic architect was not completed when he gave the monks the necessary accommodation for their services. He was careful to make this his primary object, but he went further, and in the vast fabric of the great abbey church he materialised the whole conception of the massively organised conventual system, to which Christendom owes an enormous debt of gratitude.

This theory therefore of carry-out-your-programme-and-don't-think-of-anything-else fails in so far as it ignores the ideal element present in all great architecture. It is equally defective in another respect through its neglect of the fact familiar to all architectural designers, that artistic judgment is called for at every turn to secure a just adaptation of the forms and details of a building to a harmonious general effect. There is a story of the painter, John Constable, who was visited by a young artist who discoursed on the theory of truth to nature in painting with all the crudity of the extreme pre-Raffaelite. When he had gone, Constable was heard to remark to himself: "Well, after all, there is such a thing as the art." The bold theory of "truth" in architectural design may produce good building, but not a work of æsthetic value. For architecture, as well as for pictorial composition, "there is such a thing as the art." Thus, in the Romanesque abbey church or the Gothic cathedral, the general masses and divisions

are determined by its plan, and this plan was a gradual growth from the early Christian basilican scheme. It may be said, in passing, that it is a mere hallucination that the cruciform plan was adopted because of the cross of Christ. This was only thought of afterwards, like the "crank" notion, that the accidental or careless deflexion of a chancel from the main axis of the building had any symbolical intent.

If the plan determined the distribution of spaces, the elevation was partly based on the plan, but in part followed from the system of construction. Gothic construction was very prolific in forms and details that depended on how the building was put together. These forms, generated in the fabric of the building, materialised on the exterior, which became in this way the outward expression of the internal organism. These divisions and details, these projections and recesses of a façade are, however, only given in their *general* forms and locations by the plan and the constructive system, and they have to be modified and shifted and shaped and subdivided and accentuated by details, through what has been aptly called "personal inspiration, knowledge, and judgment,"* and not by pre-determined arithmetical ratios. That in all fine architecture a façade is the expression of the inner constitution of the building behind it seems to be quite ignored by the geometrical formalists, who reduce the subtle and difficult art of architectural design to a juggle of mathematical diagrams on a sheet of drawing paper.

Up to this point the work of the mediæval builder has been treated rather from a negative point of view, but in the combatting of false—and correction of partial—notions, some of the true principles that underlie architectural design may become clear. Going on now to a more positive treatment, it must be noted that the title of this lecture, "The Work of the Mediæval Builder," covers a very large subject. It falls however conveniently into two main divisions. The work of the builders of the earlier Middle Ages was inspired by quite a different spirit, and materialised in markedly different forms, from that of the later Middle Ages. Both periods produced immense and complex architectural monuments, and in both the constructive work was carried out into detail, and clothed with rich or delicate ornament, in a

style that seldom failed to hit the mean between the severe and the lavish. The earlier period, that of Romanesque or round-arched architecture and of the decorative art of the monastic workshop, formed the subject of a paper that I had the pleasure to read before an architectural audience in Manchester a year ago, and I propose therefore to confine what I have now to say to the later of the two periods, called by the well-understood, though in itself meaningless, term "Gothic." The century, from about 1150 to 1250, saw the evolution of an architectural style of marked originality and charm, and the creation in that style, in the central districts of France, of some of the greatest, the most varied, the most inspired works of human art. The cathedrals of Chartres, Amiens, and Reims stand beside the Parthenon and Sta. Sophia at Constantinople as representing the highest achievements of the arts of building and decoration that the world has seen. It may, indeed, be claimed for the mediæval building that it advanced beyond its classical predecessors in that it introduced, what is with them absent, an element of mystery, of appeal to the imagination, and to the sense of the infinite, which contributes not a little to the effect of the complex and elusive Gothic monument. These great churches—for it is only in the religious monument that the style reveals its capabilities—possess for us a threefold interest: constructive, æsthetic, and spiritual, this last word being a convenient general expression embracing all that concerns the intellectual, moral, and religious side of human life. Points of constructive and æsthetic interest can be illustrated later on by means of photographic transparencies, but, for the understanding of the more remote considerations just referred to, it is necessary to have some knowledge of the conditions of the time that saw the birth of the style. That style was a creation of the twelfth century, and it came into being in the central district of France. This region was at that epoch the theatre of new movements in the political, social, religious, and intellectual spheres, and in the domain of the imagination and the emotions, and every aspect of these movements has left its impress on the monuments in which the mobile thoughts and feelings of the Age crystallised in clear-cut and beautiful forms. It is because Gothic is in this way charged with human interest that it has made so special an appeal to all who in the last hundred years have loved architecture.

* F. R. Hiorns [F.], in *Journal*, vol. xxviii., 297.

Adopting for the moment this point of view, we may note among the characteristics of early French Gothic a remarkable boldness and an ambition for great things, which sometimes led to the inception of colossal schemes that could never be fully carried out; but the boldness was not the assertion of rude strength, for the schemes were always controlled by a feeling for delicacy and refinement that invests the building with an atmosphere of culture. Writers of the Italian Renaissance, such as Vasari, affected to regard mediæval art as barbarous, but Pierre de Montereau, who designed the Sainte Chapelle at Paris, was in his way just as scholarly and disciplined in mind as the Florentine Brunellesco, though not so learned. In fact, another prominent quality in Gothic is at the very antipodes to anything rude or rustic, and this is its quality of scientific precision, which rules Gothic construction, at any rate in France, and which in our own country led to the remarkable feats in elaborate cutting and jointing of stones in the fan-tracery vaulting at Cambridge or Westminster. This quality was in its turn balanced by the quite opposite one of exuberance and complexity in the multitudinous details that clothe the fabric. In all the fine early work, however, this display is kept under strict control, and there is always observed the old Greek principle of the relations of construction and ornament. According to this principle, the skeleton of the structure, the really working parts of the fabric, are left plain to do their work as completely untrammelled as the stripped limbs of the athlete, while enrichment is confined to the intermediate spaces and parts of rest in the constructive organism. Later on, in the decadent French Gothic, as at times in our own so-called "decorated" style, the tendency is for the enrichment to spread itself too freely at will. The quality, however, in this early French Gothic that makes to us the most intimate personal appeal is its humanity and tenderness, and the love of Nature, especially of the floral beauty of the fields, of which it gives evidence. In the figure and foliage sculpture with which the buildings are adorned, and which is at its best at Reims, we recognise a truth, a human sentiment, a winning grace, a touching appeal, to which our hearts open in response.

I am now proposing to enlarge a little on what has just been said, and to run over some of the prominent features of the life of the Age which saw the birth of Gothic. All that is adduced will be

seen to have a direct bearing on the subject, for Gothic architecture expresses in artistic form what the historian describes as social and intellectual phenomena. To these social and intellectual phenomena, and to their bearing on the art of the times, will now be devoted a few moments' attention.

The twelfth century was a transitional epoch, when the human mind was passing out from under the shadow of the ideas that had dominated the earlier Middle Ages and was beginning to fit itself for the task of creating the modern world. It was a time of great stimulus and manifold activity, in the midst of which the individual man, as a creature of independent thought and feeling, was beginning for the first time to feel his own position and power, and this was the first inception of the movement that was to culminate in the Renaissance and the Reformation.

The earlier Middle Age was the age of authority. Its most characteristic institution was the monastery. In the monastery was centred all the learning, practically all the art, and a great part of the religious and social life of the times. The numerous monastic communities were bound together in what was essentially one vast organism controlled by the central ecclesiastical authority at Rome, and of such a system the great abbey church was a fitting outward symbol. In the political sphere also the principle of absolute, divinely constituted, universal rule was supposed to prevail, but, as a fact, European society had suffered such severe blows from the successive invasions of the Scandinavian Vikings that it had broken up into isolated fragments that were only loosely knit together by what is known as the "feudal system." Now, in the early part of the twelfth century a new political institution came into being. This was the French monarchy, a secular dominion based upon nationality after the modern pattern. During the course of the twelfth century the French kings, whose capital was Paris, gradually extended the effective power of the crown over the various practically independent principalities and dukedoms into which feudalised France had been divided up, and established their rule on a basis of rational give-and-take over subjects whose chief care was neither praying nor fighting but the peaceable avocations of trade and agriculture. Of Philip Augustus, the chief representative of this new political order, Guizot remarks that "he had

a straightforward, active mind, ever full of a desire for order and progress, and he effected many things in promotion of the general civilisation of the kingdom. He had the streets of Paris paved, he extended and heightened the walls, he constructed aqueducts, hospitals, churches, market places, and occupied himself earnestly in improving the material condition of his subjects." "He took the bourgeoisie," it has been said, "into partnership," and was the "ally and protector of the communes." At the battle of Bouvines, in 1214, the burghers of Philip Augustus scattered the knights and nobles of the imperial levy with the forces of the feudal English King John. As a result of this policy the towns of this period rose rapidly into importance, and this was a fact of capital moment in connection with Gothic architecture.

But, though secular, the monarchy was none the less religious, and this appeared in the character and work of Saint Louis, the successor—after a short interval—of Philip. St. Louis was a thoroughly effective ruler, and extended mightily the royal authority, yet he was at the same time a saint of the most attractive type, though unfettered by monastic vows. A new possibility was thus made patent to the world, and affected both religion and social life in all its phases—the possible sacredness of the secular calling. Religion might be now a personal matter, independent of conformity to the monastic system, and a man might pursue any occupation in a religious spirit. This was especially the case with war, for when the crusades, which belong to this period, were preached, the warrior assumed the cross in the same spirit in which in the older epoch he would have taken monastic vows. It was equally the case with the arts, for architect and workman were no longer almost necessarily connected with the monasteries, but organised themselves in secular guilds that had their centres of activity in the towns. Whereas the Romanesque churches were as a rule monastic in character, the great churches of the Gothic Age were town churches, the production of civilian craftsmen, and their designers were not monks but laymen.

The buildings reared under these new conditions were however for the most part religious, for the time was really one of active religious revival. It was a revival of the best kind, as it led directly to action, and it affected all classes of the community alike. The crusading armies were formed and recruited on a religious basis, and it is noteworthy

that this movement was first taken up in France, and the French formed throughout the chief ingredient in the crusading armies. Philip Augustus and St. Louis, as well as Louis VII, who preceded the former, themselves assumed the cross, and the nobles followed their lead. The pious enthusiasm of the Age at the same time took other forms. He who assisted to rear a great architectural monument to the glory of the heavenly king was doing His work as surely as if he were rescuing the divine heritage from the hands of the infidel. For a new architectural movement, based on this idea of service in the cause of religion, the time was apt and the place prepared. Most of the important towns in the central districts of France were of Roman origin, and had been the seat of bishoprics from Early Christian times. In each there was a bishop's church or cathedral, but it was an edifice of very modest proportions. The so-called *Basse-œuvre* at Beauvais remains to this day a specimen of these earlier bishops' churches, and it is utterly insignificant as it lies under the shadow of the stupendous Gothic choir and transepts which represent the work of this new epoch. As the towns were now rising greatly in importance, the position of the bishop, the ecclesiastical head of the town, changed also. His wealth and influence increased, and in the plans for church extension, on which his rising ambition was set, he had the immense advantage of the encouragement and help of the crown. These towns belonged to the central district of France known as the Royal Domain, and the kings showed them special favour, so that the new building activity had at its back the public resources of the kingdom. In this way it came about that in the last half of the twelfth century and early part of the thirteenth these cities became the theatre of a constructive and artistic activity so extraordinary that, for the mere amount of work accomplished, as Viollet-le-due has remarked, the only period comparable is the modern industrial era that has covered Europe with a network of railways. At the death of Philip Augustus, in 1223, there were some twenty cathedrals, mostly of the first rank, erected or in the course of construction in this royal patrimony of Central France.

This work could hardly have been accomplished merely by royal patronage, on the initiative of the bishops, and by the hands of the craftsmen of the town guilds, had not these been urged and sustained by the enthusiasm and liberality of the populace at

large. A contagious impulse seized on the minds of all classes of the population and hurried them forward with the same fervour that was carrying others to the crusades. Here are one or two extracts from contemporary records* dating from about the middle of the twelfth century.

"In this year (1144), at Chartres, there were seen for the first time the faithful harnessing themselves to the wagons that were laden with stones, wood, provisions, and whatever else was needed for the works at the cathedral. As by the might of magic, its towers rose heavenward. So was it not only here but well nigh everywhere in France and Normandy and in other lands. Everywhere men were humbling themselves, everywhere doing penance and offering forgiveness to their enemies. Men and women were to be seen dragging heavy loads through swampy places, and in holy songs praising the wonderful works of God that He was doing before their eyes."

Another contemporary writes: "Who has seen or heard aught of the kind, that great lords and princes of the world, puffed up with riches and honour, and even ladies of noble birth, have bent their proud necks to the yoke, and like beasts of burden, have dragged to the workmen at a church cars laden with wine, and corn, and oil, with lime and stone and timber?" The same writer describes the passage through the country of organised bands moving from work to work as if under a crusading vow. "The Lord God seems Himself to be their leader. . . . When the pilgrims have arrived at the church, where they would fain lend their aid, they set their cars in a line, and place lighted lamps and candles upon them, while they watch the whole night long and continually sing psalms."

This atmosphere of popular enthusiasm that surrounded the craftsman accounts for many of the most prominent characteristics of Gothic art. It has been suggested that the tendency towards height of the Gothic building is, after all, only due to constructive exigencies, but this cannot be accepted. When the choir of Beauvais rose to such a height that the crown of the internal vault soared 150 feet above the pavement, and at first was upborne by supports so few and slender that the structure fell in ruins, it was not a question of mechanics but of an idea. The canopy of masonry

was made to float in the air, all the lines and masses were striving upwards, the spirit of aspiration was breathed into the stones till they became like things of life. The French Gothic church of the period became in this way the most expressive of all the forms that human architecture has assumed. In its emphasis on the vertical, it brings into evidence the heavenward striving of the minds lit up with the new fire of holy effort, while the vastness of scale on which the buildings were planned, and the boldness with which, as at Beauvais, the most audacious feats of construction were attempted, are the outcome of the great movements of advance which marked the age. There is the suggestion, too, of a limitless self-devotion in the multitudinous details of the structures, their elusive complexity of parts, and the apparently wayward freedom with which ornamental details play around the constructive forms. A lavish outpouring of effort is the impression we receive, but it is important to note that it is not a case of mere Oriental or Celtic profuseness flooding in aimless fashion with ornament and detail every surface that can be commandeered. A severe logic controls the disposition of all the parts, and in this the intellectual temper of the age finds its architectural expression. For this twelfth century was the age of the founding of universities, of which that of Paris was perhaps the first in time, and, at any rate in the twelfth and thirteenth centuries, the most important. In the words of the writers just quoted, Paris became at the time in truth a world city, the only one in the West deserving of the name, and its university was the focus of the sciences. A writer of the age of Philip Augustus makes no idle boast when he declares that Paris was attracting to herself more learners than did ever Athens or Alexandria, and Paris was called, in a popular saying, "the fountain of wisdom to which all the world came to draw supplies." The intellectual life thus quickened expressed itself in the so-called scholastic philosophy. This was an attempt to elucidate the doctrines of the church by the aid of the reasoning powers. It was not a movement in the direction of what is known in modern times as free thought or rationalism, though the beginnings of this, as of so much else that makes the modern world, may be discerned in this great epoch-making twelfth century. Free thought begins, indeed, in this century in the teaching of the famous Peter Abelard, one of whose sayings, "A doctrine is believed,

* Quoted from Dehio und von Bezold, *Kirchliche Baukunst des Abendlandes*, Stuttgart, 1892-1901, II., 22f.

not because God has said it, but because we are convinced by reason that it is so," contains the germ of the future development of European thought. It is another proof of the enthusiastic temper of the times that when Abelard, as might have been expected, was driven out into exile, he was followed by thousands of students, who found him out in his solitude and built cabins about his hut, where they lived on such nourishment as they could find and devoted themselves to hearing his discourses. Scholasticism was something different from this, and the intellectual ardour that underlay scholasticism did not inspire free inquiry into fundamental doctrines. These were accepted without question on the authority of the Church, but the active minds of the scholars of the day applied the closest thought, the most ingenious subtlety in argument, to the working out in detail, and to the systematic explanation, of these fundamental doctrines. Whatever the actual philosophical result of this, there is no question that the habit of close logical analysis and connected argument was an invaluable factor in the training of the European mind.

Scholasticism may be described as strict intellectual formalism, and it is interesting to note that the same characteristics are in evidence in Gothic construction. In these early French cathedrals, erected in the home of the scholastic philosophy, we observe a logical consistency, an almost mathematical rigour in the carrying out into details of a single system, which may justify the appellation which has been conferred on Gothic of "Scholasticism in stone." "Both the philosophy and the architecture of the age," it has been pointed out, "agree in delighting in work, in the actual taking of pains, and also in intellectual method. They have the same combination of boldness and sobriety, the same severely rational carrying out of arbitrary premises, the same self-intoxication with logical formalism. Just as scholastic begins its didactic structure, as it were, at the top, and derives everything else deductively from the highest principle, so in Gothic everything is a consequence of its special system of vaulting. In the same way that scholastic proves the improvable by the help of the authority of Revelation, which lies outside the scope of reasoning, Gothic architecture accomplishes the marvel of its vaulted stone canopies, resting on incredibly slender supports by

the help of the system of buttressing, which lies outside the visible internal structure."*

It cannot be concealed that attention is here called to features of Gothic that have fairly enough been made the subject of reproach. Gottfried Semper, whose is the phrase just quoted, "Scholasticism in stone," and who is the most philosophical of all writers on tectonics and decoration, points out that, logical as Gothic may be, the vaulted building is not really clear, for the striking features of the exterior—the piers, pinnacles, and flying buttresses—do not carry on their face the explanation of their function in the organism, and to understand what they are doing we have to go inside. It must, of course, be admitted that no architectural style is perfect, and Gothic is no more immune from criticism than any other style, but, taken as a whole, it is in the domain of art one of the most wonderful of human creations.

It should be explained that what is said here applies almost exclusively to the early French examples of Gothic art. The constructive interest which attaches to these incomparable monuments is not found to nearly the same extent in our English Gothic cathedrals, which have their own special qualities and charms, surpassing, in many important respects, what we find in France, but which are not so severely logical in their structure. Of Gothic construction, it has been said that it depends on the new principle, unknown in earlier vaulted structures, of the resistance to the lateral pressures of a vault by counter-pressures rather than by a rigid immovable mass. The Romans, it is said, built up a solid abutment against the pressure of a vault, whereas the Gothic constructor met it by the counter pressure exercised by the flying buttress. The flying buttress is, however, only an accident, due to the fact that the building possessed side aisles that had to be kept clear along their whole length for the passage of processions, and had, at least in the North, to be roofed at a height low enough to admit of clerestory lighting in the nave. Had the Romans employed buildings of the kind they would probably have adopted the same device. The Sainte Chapelle at Paris is just as Gothic as Notre Dame, but, as it is a single-aisled structure, the pressures of the vault are met by solid abutments and not by flying buttresses. In the Sainte Chapelle, however, what is really the true Gothic principle is fully carried out. This principle is the

* Dehio und von Bezold, l.c. p. 15.

concentration of attention on the points where the pressures of the vault are exercised and the elimination of the intermediate areas of masonry. Between the points on which the pressures of the vaults are concentrated, no masonry is needed for the support of the superstructure, and what the builder of the Sainte Chapelle did was to cut out the intermediate panel of walling and swing it round through a right angle, so that it serves as a solid buttress at the point of pressure. The original panel of walling becomes a pier set out from the building in the direction of the line along which the pressure was exercised, and in this way meeting it quite in a Roman fashion. The intermediate space, now left open, was filled in with a screen of coloured glass, one of the most beautiful things human art has ever produced, stiffened by graceful window tracery in its chaste geometric lines.

Accordingly, in the early French Gothic building, everything depends on following the constructive principle with logical completeness into all its issues, but the quickened life of this wonderful Age was just as manifest in the domain of sentiment as of logical thought. To this time, the time of the crusades, belong the ideas of chivalry, of the devotion to the feminine idea, knight errantry, and the like. About chivalry there may have been a good deal that seems to us fanciful or even fantastic, but these ideas had the advantage that they called men out of themselves and set their thoughts on ideal, unselfish aims. Refinement in manners also advanced, and it is worthy of notice that Dante, in the early part of the fourteenth century, still looks to France as the centre of social culture, the home of luxury and of the elegances of life. (*Paradiso* xv. 95 f.). Hence the quality of refinement in Gothic, evidenced in the precision and clearness of the constructive details, is also conspicuous in the beautiful figure sculpture with which the exteriors of cathedrals, such as Reims, were so lavishly adorned. With the refinement of manners and the cultivation of chivalrous sentiment went a new literary movement, and the twelfth century in France witnessed the rise of a vernacular literature in the form of romances and love songs in old French that expressed the emotional temperament of the people, and this same vein of romance runs through Gothic decoration and detail, and goes far to make the French buildings of the time so sympathetic and attractive to the modern denizens of the romantic north. A special feature of this decoration

is the fresh love of Nature, so marked in connection with the treatment of the human countenance, and also in the leaf and flower ornament. This last is treated with a curious naturalism, and, although from the æsthetic point of view we may prefer for architectural use the more conventional treatment of foliage motives which we find in our own contemporary "Early English" carving, yet the French work has a charm of its own through the evidence it affords that the creators of it had opened their eyes afresh to the rich variety of motives offered by the floral beauty of the earth.

[After the exhibition of a series of lantern transparencies, the lecture concluded as follows.]

To many here present all this may seem as unreal—as unlike life as they know it—as a fairy tale. The arts of building and decoration pursued under present conditions are not surrounded by any glamour of religious inspiration or of poetry and romance. When we turn from the early Gothic period to our own time, we are conscious of something like a descent from heaven to earth. The ideal, the spiritual, element in the work of the constructor is apt in these times to be obscured by the practical, and at times sordid, details and difficulties with which he has to struggle. Not but what mediæval designers and builders had their own stumbling blocks, and a Guild Council of the Middle Ages may have been as troublesome as any similar institution of to-day. *Punch* used to have delightful little pictures of mediæval knights and ladies in tight places, and might add the constructor to the other victims of these romantic, but at times inconvenient, old-time conditions. This is not however the point. The point is not that there was a sordid side to mediæval architecture, but that there is an ideal side to modern. This applies equally to the builder's craft as to the more pronounced artistic elements in design. The precise accurate cutting and fitting of stones or the fair laying of bricks is æsthetic—a delight to the doer as to those who contemplate the finished work. A finely-wrought wall surface is a beautiful thing in itself, and if even in modern times there is an ideal side to all the processes of the builder's art, there is surely a good reason for dwelling a few moments on the artistic phenomena of an epoch when this ideal side was specially in evidence, for something of the spirit of the ages of faith we may bring with us even into the more prosaic tasks of the present hour.

Some Thoughts on the International Theatre Exhibition at South Kensington

By W. W. SCOTT-MONCRIEFF, M.C. [F.]

IT is impossible for one who has never attempted to produce stage scenery or costume to appear in the guise of a critic; for never to have attempted performance is to be ignorant of scope and limitation. These remarks therefore are offered from an architect playgoer rather than from one posing as an expert in stagecraft.

In the first place the Exhibition was stimulating and so achieved its main object. It is as well to bear in mind, however, that it was a display of representations of things and not a display of the things themselves. What we saw, therefore, was what we see every year in the Architectural Room at the Academy; a profusion of designs dexterously drawn and coloured and in all probability having the same somewhat remote resemblance to reality. This thought may have given us an insight into the bewildered state of mind of those laymen and women who creep into the quiet retreat of the architect's cubicle, glance round at the facile representations on paper hanging upon the walls, and wonder what it is all about.

Many must have been struck by thoughts on the subject of draughtsmanship, and such must have asked themselves if it is possible in the space of a super foot to give any practical idea of an arrangement of forms and colour to occupy several thousand cubic feet. Did any come to the conclusion that the use of pencil, rule, paper and colour, both for the architect and scenic designer, is best directed towards the making of the necessary practical statements to the end that imagination may become reality, rather than using them as a painter uses paint to produce a picture or a decoration? Did any think of the books of Palladio's drawings in our Library; of these extremely simple statements of form, proportions and clear dimensions, which this great man made, so that he might pass on to constructors an adequate medium for building the solids and voids which he had imagined? Did any compare this simplicity with all the fuss and bother of the modern atelier draughtsmanship imported from Paris? Did any doubts arise as to whether the present system of architectural training is best calculated to produce the two most desirable elements of dignity and simplicity? At the Exhibition did any feel a wish to see, at least, a few drawings, telling us how the scenic designer really does his job?

The present writer went to South Kensington feeling that he would see a branch of our art which has been lost to us, and with the names of Palladio, Inigo Jones and Bibieni, in his mind. He went home convinced that

the modern scenic designer must of necessity be an expert and specialist. There was ample evidence to show that the designer of scenery and costume could not do better than begin with a thorough training in architecture, which is, or at any rate should be, the best training for those setting out upon a career of having things beautifully fashioned through the medium of pencil and paper.

It was here that most of the designers seemed to fail, not so much because their designs were unarchitectural, though in many cases this was true, but because the majority lacked those very qualities which the architect develops and which would appear to be essentials in scenic design.

Now the stage is obviously the legitimate place for fantasy, and even for the grotesque. It is therefore a place where *correct* architecture is not a condition. For in many of the designs and models the incorrect, and even the impossible architecture might have been passed over as tolerable, but for glaring defects in the arrangement of forms, and what is still more important—scale.

The tendency in modern stage design appears to be to obtain as great a sense of height above the human figure as possible. This is legitimate enough, but when carried to extremes the effect becomes forced and annoys rather than pleases. If scenery is to be the background of a play, as the accompanist is to the singer, then these and similar exaggerations are calculated to mar the harmony of the performance. Exaggeration here, as in every other art, must surely be used for the purpose of accent only. Super-exaggeration must convert accent into absurdity, and the result must consequently lack both style and scale. As in the main scale of the settings, so, too, the scale of the details in their relationship to one another appeared to be not thoroughly enough understood.

Perhaps the most interesting section of the Exhibition was the Model Room, for here we could see reality in miniature, and as each model was recessed into a black screen and brilliantly illuminated in a darkened room, the important factor of lighting was represented in an intelligible way.

Mr. Gordon Craig is such an authority, and we are indebted to him for so much fresh air which he has blown into the subject, that one hesitates to offer comment. His arrangements were vast and simple, and composed of huge shapes without mouldings, windows, or relief of any kind. They towered over the figures set upon his model stages and reduced these Lilliputs to nought. If the figures were to scale we could only feel sympathy with the actors who must surely shout at the top of their voices (all through the performance) in order to make themselves heard in these cavernous recesses. Is it not the idea of "originality" at all costs which has created this craze for super-exaggeration, and which is now so common that we find it difficult to distinguish from artistic advertisement—of all faults

the most unpardonable? Contrasted with Mr. Gordon Craig's work, how quiet and original were the more restrained and traditional designs of Mr. Oskar Strnad. His remarkable series of drawings for Danton's Death breathed the very spirit of the Revolution, and if their author gave this atmosphere in his actual scenes, with the red draperies and the perfect scale maintained as in the drawings, how full of power they must have appeared!

And here surely must lie the whole secret, not only for stagecraft, but for everything made by the hand of man. Behind all the forms and the various modes of expression, ranging from a chair or a table to a stage scene or a palace, the spirit of the man who wrought, must, in the last resort, prevail or go under. The only standard we can judge by is that of Truth, who neither exaggerates nor diminishes but shows the steady and clear light of her luminous sphere. No poet, no artist, no craftsman can ever hope to visualise this sphere as a whole, but some have such a power that the arc of their thought may touch it—as we believe Mr. Strnad touched it in his series, *Danton's Death*.

It is curious that this opinion had been formed of Mr. Strnad's work before the writer of this notice had realised that Mr. Strnad is an architect, and this brings us to another point.

Our profession is, alas, overcrowded. It would seem obvious that that of scenic designer is worthy of a life's study, and that costume designs are best made by the hand which contrives the scenes as a background to them. What could be more delightful than the work of scheming both scene and dress for Shakespeare or Molière, and who would be more likely to achieve success than the scenic designer who took his first step by acquiring a knowledge of architecture?

Some of our students would do well seriously to consider this outlet to an overcrowded profession, and should they decide to take it up to do so as specialists. At the Exhibition there was ample evidence that the architecturally trained mind could have made a great improvement on most of the designs submitted. Let the student not be scornful at the thought that the art of the scenic designer is as evanescent as the art of the actor whose personal contribution in any particular play vanishes as the curtain is rung down on the last performance. Many an architect wishes he could ring down a curtain to screen his essays in brick and stone which often he feels must bear witness to his failures until Time rings the bell. But then, after all, "the play's the thing."

HOME OFFICE REGULATIONS FOR FACTORIES AND WORKSHOPS.

On the recommendation of the Science Standing Committee, the Council have decided to press for an enquiry to be held by the Home Office before the proposed Regulations under the Factory and Workshop Act for Buildings in course of construction are issued.

Review

THE RENAISSANCE OF ROMAN ARCHITECTURE. PART II.—ENGLAND. By Sir Thomas Graham Jackson, Bart., R.A. 42s. net. [Cambridge: The University Press.]

The publication of the sixth and concluding volume of Sir T. G. Jackson's series of books on the History of Architecture is an important event in the literature of our art. This latest book follows on the one which dealt with the Renaissance of Roman Architecture in Italy, and carries the story on to our own country.

The book presents a familiar subject from a fresh point of view.

In the main it is a masterly exposition of the tentative and reluctant experiments made by the traditional builders of England to launch into the revived Roman style. Sir Thomas delights to point out the dominating influence of the mediæval and vernacular tradition, during that period of immature and fresh adolescence that makes so universal an appeal in early Quattrocento Florence and the châteaux of the Loire, when the classical features were little more than accidental accessories in buildings otherwise mediæval in both form and construction. He cites Laver Marney and Sutton Place, "though Italianising cherubs frisk in panels over the openings." And again, "The classic details had lost their meaning: they were used in ways for which they were not intended: it is not in them that the charm of Kirby and Longleat, Knole and Hardwick consists; we look through them to the stable Gothic work upon which they are only grafted as accidental features."

This passage summarises the author's viewpoint. As in his volume on the Renaissance in Italy, he cleaves to the old tradition and meets the revolution in outlook with unrelenting disapproval, and throughout the whole two volumes, with their wealth of knowledge, is woven the strong personal bias of the writer for his own strong and independent views.

He represents the antithesis to Sir Reginald Blomfield and Mr. Geoffrey Scott.

But whether the reader agrees or not, in these days when classicism is the dominating conviction, it is most salutary to have the whole gamut of the Italian and English Renaissance laid before us in a form which demands thought and questioning.

Many of the keenest classicists are feeling for the spirit rather than the letter of the law, are realising that the architect generally has done and will do his best work when he loses his self-consciousness in design and is controlled by Reason, basing his conception on Utility and structural need.

Even the classicist, the unregenerate Palladian, will agree with the splendid summing up. "True beauty and utility hang together. That is the clue for our future progress, if we are ever to progress in art. It was

from difficulties of construction, opportunity of material, advantages of better appliances, greater knowledge of nature, that the best suggestions came to the architects of the past, and from them must be derived by the architects of to-day."

One of the most interesting features of the book is the lucid exposition of the social history of the age, showing how it explains the movement, and how one reflects the other. The account of the splendour of Wolsey's domestic establishment, amounting to five hundred persons, of his plate and furniture and tapestries, and all the rich and well-ordered pageantry of the days of his glory, are facts that relate us to the life of the times in a vivid and imaginative way. Unless architecture is related to life it is but a dead and empty formula. The extravagant scale of the Tudor and Elizabethan aristocratic domestic architecture is endowed with life-giving spirit by the picture that is presented of the splendour of the entertainments and the richness of the accessories of daily life. We see the evolution of the domestic plan, the gradual struggle for more amenities, for greater privacy and decency of life. Yet even so, the inconvenience of these passage rooms appears well-nigh intolerable.

As in the Italian volume, the evolution of the status of the designer is explained, and the transition from the contracting master mason to the architect in the modern sense of the word, for in the time of John Thorpe the old way of managing the building operations began to be superseded by the more professional status of the architect.

An interesting commentary on the conditions of the building trade is summarised by extracts from the building accounts of Wadham College, Oxford.

The crafts are fully dealt with, terracotta and decorative plasterwork, wood panelling and carving, and the art of the smith.

Only one chapter is devoted to the works of Inigo Jones and Sir Christopher Wren, and one cannot but regret that more space is not devoted to these great English masters, for with the author's unusual powers of compression, a great amount of valuable information is crowded into these pages. But there is enough to show that Sir Thomas claims in Wren, in spite of his Palladianism, an apostle of Liberty and Freedom. He notes with delight Wren's freedom from convention, and the irregularities which give a charm to his style. Here is "an artist free from prejudice, going the straightest way to his purpose, and handling the new style with a freedom that serves to rank him with Michel Angelo, who was equally contemptuous of precedent in architecture and of conventional restraints." Here is a fruitful field for argument.

The successors of Wren are quickly passed over. Vanbrugh and Hawksmoor have a page or two, Gibbs, and particularly the Radcliffe Library, a larger share; but the brothers Adam, those ardent Romanists, have less than a page rather to their discredit.

In conclusion, amidst declamations on modern art, come summaries of wisdom which is the outcome of the author's long and honourable career. These must be universal in their appeal, and it is good to know that our profession still boasts men of scholarship and sound learning and breadth of view.

"Art is not a matter of talking but of doing. To live it must be natural, spontaneous. It must come to our conception as naturally as our language to our lips; it must be the free expression of our ideas, unfettered by formal rules and unchecked by premeditation. It must flow from us unconsciously. To talk about it means that we regard it consciously, and for art to be self-conscious is fatal."

The book is no mere history book, it is the expression of the author's æsthetic philosophy and carries throughout the impress of his strong and independent individuality. So the whole subject is freshly treated, whether he be dealing with such familiar examples as Hampton Court, Kirby or Longleat, or lesser known buildings such as Hambleton Old Hall, Grove-place, or Lyveden.

The book is uniform with the other volumes of the series, and worthy of the high standard maintained by the Cambridge University Press. Binding and paper and type are a joy to the booklover. The illustrations are many, mostly from the author's own drawings, old prints, and photographs; and many of them show unfamiliar subjects or familiar subjects shown from a fresh point of view. Chronological tables and index add to the value of a fine volume. Whether the reader entirely agrees with the argument or not, he cannot fail to be stimulated and enlightened by the clear, vigorous style, the breadth of culture, the mature experience and depth of scholarship of the distinguished and venerable author.

J. HUBERT WORTHINGTON (A.).

ARCHITECTURE AND JOURNALISM.

The *London Mercury* is not only one of our most interesting monthlies, it is also one of our most adventurous. It stands almost alone among general periodicals in remembering that architecture is one of the fine arts. Mr. J. C. Squire, its editor, obviously takes the view that architecture possesses, or should possess, just as much interest for his readers as music or sculpture or poetry. The September number contains an article by Mr. Halsey Ricardo on "The Historical Teachings of Architecture," which should prove illuminating to historians, and Mr. A. R. Powys continues his series of critical articles on the buildings of London, thus following in the footsteps of Professor Reilly and Sir Reginald Blomfield.

Correspondence

A REGISTER OF CRAFTSMEN

11, Stone Buildings, Lincoln's Inn, W.C.2.

To the Editor, JOURNAL R.I.B.A.—

DEAR SIR,—I write to propose that a "Register of Individual Craftsmen" should be opened and kept in the Library. I believe that the majority of our members will share my views on this matter and I should like, briefly, to state them, in the hope of evoking such support as will lead to the proposal being favourably considered by the Council.

I hold then, that, as Architects, we ought to feel nearly as much hesitation in employing a commercial firm to undertake a work of art as in going to a coiners' den to cash a cheque; and that the establishment of a register of the name of genuine Craftsmen—who are Craftsmen in fact, and not mere exploiters of handicraft keeping Craftsmen as a dairyman keeps cows—would confirm a principle which is, surely, generally accepted among us, and enable us readily to obtain the services of individual Craftsmen who remain inconspicuous only because they do not employ publicity agents; do not brag themselves into notoriety by advertisement; do not use touts to cadge orders, and who generally observe the standards of the artist and the professional man.

This view is not merely sentimental—although I think that sentiment is usually a better guide than hand-to-mouth expediency; it is, in fact, part and parcel with the standards we have set up in our "Rules of Professional Conduct," for we cannot properly claim to uphold the principle of *service* while we deliberately delegate part of our obligations as designers to persons whose motive is not service at all, but solely *profit*. It cannot be pretended that the commercial firm is employed because the work it produces is better or—kind for kind—cheaper than the real thing; in fact, the only quality conferred upon applied art by the intervention of the middleman is the substitution of the slick, the easily understood, the expected and the pretentious, in place of the happy enthusiasm and individuality which characterises the craftsman's unfettered output. No craftsman cadges for work he cannot undertake and then lets it to someone else on bargain terms, who, in turn, perhaps hawks it out on the chance of again sub-letting it. No Craftsman seeks to duplicate and reduplicate his designs, to copy antiques, to fake his work and substitute debased material: the very test of the Craftsman is that he does not, and cannot, do these things, and for that reason, alone, we ought to signalise him as of our brotherhood, and, in some degree, make good the disadvantages he suffers, as one who plays the game, in competition with those who do not. The commercial exploiter of craftsmanship has secured our custom, not

by any distinguished merit in his performance but by laying himself out to flatter our vanity and our indolence. This is the trump card in the salesman's game of cajolery: it is pleasanter for us to have a profuse gentleman dancing attendance with obeisances denied to us, since the war, by even our own servants, than to meet a colleague on a level footing. The salesman understands this; he knows, too, the importance of awakening a sense of indebtedness, and he would sit and fan the architect all day if by so doing he thought he might, like a gaffly planting its egg, fasten an obligation into his flesh.

For these reasons I think it is due from us to make it a matter of duty—a point of honour, even—to search out and employ the individual craftsman. While we do not avow this principle—as we might avow it by the establishment of such a Register—it is mere shoddy insincerity to talk bow-wow-wow, as we continuously do, about the dignity of the Arts and the glories of mediæval craftsmanship. One of us, who has had wide experience, lately expressed the considered opinion that there was now available as good craftsmanship as there ever had been, but that there was very little of it:—and this brings me to my concluding point, which is that, apart from any reason already urged, the policy I advocate has become a matter of simple expediency; for why is there so little first-class craftsmanship? It is because the true Craftsman is being driven out of existence by commercial exploiters of the spurious, the mediocre, the specious and the cheap; and the architect will soon share the same fate as the Craftsman. It is folly to ignore what is happening about us. A memorial—a window or a monument—is talked of, and the commercial man, who weekly searches the columns of the provincial papers for news of such things in a club in London instituted for these and kindred purposes, at once despatches a unit from his cohort of touts to infest the proprietary doorstep like an insurance agent and cadge the order. The large drapery shops, "Stores" they now like to call themselves, are "prepared to submit designs and execute structural and decorative work of every description"; and they have architects on strings or accommodated upon the premises to this end. One of these shops in the past exhibited, as a bait, a model of a house by the celebrated architect, Joseph Sequence—as I will call him—and offered to design and erect for its customers a "Joseph Sequence House." We are relieved of part of our legitimate work at the instance of the man who comes down to take measurements for curtains, and the firm of constructional engineers we employ to carry out industrial buildings appoints itself as consultants for the subsequent extensions. And so on and so forth. In neglecting our duty to craftsmanship we are fattening the ogre who will in turn devour architecture.—Yours faithfully,

H. B. CRESWELL. [F.]

Tenth International Congress of Architects, Brussels

4-11 September 1922

The Tenth International Congress of Architects was held this year at Brussels from 4 to 11 September. The programme arranged for the proceedings was published in the JOURNAL of 19 August. Delegates representing thirteen nations were present at the Congress, which, however, excluded representatives from the Central Powers, M. Moenaert, the Secretary General, stating in his speech at the opening meeting that the Belgians refused to accept their participation, as the peoples who had suffered by the late war had not yet recovered from their wounds. The President of the Institute was unable to be present at the Congress. Mr. John Slater and Mr. Edward Warren, however, attended as representatives of the Royal Institute.

Mr. John Slater, in a report of the Proceedings,* refers to the fact that the Congress met under somewhat unusual conditions. In the past the Congress had been organised by the Comité Permanent International. This year being the fiftieth anniversary of the foundation of the Société Centrale d'Architecture de Belgique, that Society decided to hold the congress and issue the invitations. An informal meeting, however, of members of the Comité Permanent was held prior to the opening of the Congress, and a temporary and provisional committee, to be called the Comité Centrale, was constituted to carry on the work of the Comité Permanent, which it was hoped to re-establish on its old footing in a year or two when, as Mr. Slater anticipates, the animosities created by the war have cooled down. The constitution of the temporary committee was confirmed by the Congress.

The opening meeting was held on 4 September at the Palais des Académies. M. Jean de Win, the President of the Belgian Society of Architects, was in the chair. The King of the Belgians was represented by General Baron de Moor; there were also present other distinguished representatives of Belgian science and art, and M. Poupinel as delegate of the Minister of Beaux Arts of France. M. Girault and M. Caluwaers were elected respectively President and Vice-President of the Congress. M. Moenaert, the general secretary, described the origin of the Congress, which should in the first instance have been held in 1915 at St. Petersburg. Since the war the organising Committee felt that the vast horizons opened by the war had upset older convictions and that it was important to group together the new elements resulting from an evolution without precedent, and this could best be effected by an International Congress. Mr. Edward Warren, speaking on behalf of the English representatives, responded to the welcome accorded to the mem-

bers by the President and expressed for Mr. Waterhouse his regret at being unavoidably absent. Among the other speakers were the official delegates of France, the United States, Denmark, Spain, Japan, Mexico, Luxembourg, Russia, Sweden, Poland, Switzerland, and Uruguay.

Among the subjects discussed at the subsequent meetings of the Congress were "The Responsibilities of the Architect," Schedule of Charges, the Appointment of State and Municipal Architects, the Rights of Authorship of the Architect, Women Architects, Public, National and International Competitions, "Town Planning," the Influence of Locality on Architecture, and the Preservation of Historic Monuments. All these subjects created considerable discussion in which the views of the delegates of various nationalities were represented.

An exhibition of international architectural drawings was held in connection with the Congress at the Palais d'Egmont, the principal exhibits being from American, French and Belgian architects. The work of English architects was not represented, as, due to a postal mis-carriage, notice had not been received in sufficient time to collect an adequate selection of drawings for the purpose. Many of the American exhibits were on view at the exhibition held in the galleries of the Institute last winter.

Visits were made to the devastated zone, to Ypres, where the deplorable results of the war are still painfully evident; to Bruges and the surrounding country, and to Antwerp. Mr. Slater, in his report, pays a tribute to M. J. B. de Win, the President of the Belgian Society of Architects, and to M. J. Caluwaers, the President of the Organising Committee, for their untiring efforts to promote the comfort and entertainment of the members.

REGISTRATION OF ELECTRICAL CONTRACTORS.

The Council of the Institute have accepted the draft proposals for obtaining the sanction of the Board of Trade for the scheme of voluntary registration of electrical contractors in Great Britain, and have agreed to appoint two representatives to sit upon the Board of the Registration Authority.

TENDERING WITHOUT BILLS OF QUANTITIES.

At the request of the London Master Builders' and Allied Industries' Association, the Council have directed that a notice should be printed in the R.I.B.A. JOURNAL recommending that in the case of ordinary works exceeding £1,000 in value contractors who are invited to tender should be supplied with bills of quantities.

* *Architects' Journal*, 20 September.

Imperial Institute Advisory Committee on Timbers

REPORT ON EASTERN CANADIAN TIMBERS.

The Imperial Institute Advisory Committee on Timbers, which includes three members nominated by the Royal Institute of British Architects, has been inquiring for some time past into the possibilities of using British Empire woods in greater quantity in this country, and has already issued a number of reports dealing with the timbers of British Columbia, West Africa, New Zealand, India, etc., which have been published in the *Bulletin* of the Imperial Institute.

A new report on Eastern Canadian timbers has recently been issued by the Committee.

These provinces of Canada produce large quantities both of softwoods and hardwoods, which are fairly well known in this country. Eastern Canadian hardwoods are of considerable reputation and importance, but at the present time interest centres chiefly on the softwoods, in view of the great demand for timbers of this class and the intrinsic merits of the woods themselves, and it is owing to the courtesy of Dr. Chandler, the secretary of the Committee, that the following short summary of the Committee's remarks on the principal softwoods considered by them is given.

Spruces.—Eastern Canadian spruces are largely imported into this country under the trade name of Canadian spruce, and the Committee consider that these woods should be far more widely used in this country than at present. The timber is freely used for house building in Canada and the United States, and is largely employed in Ireland, Scotland, and the Northern and Midland districts of England for the same purpose. In the East and South of England (including London), however, there is a prejudice against this wood for building and other important purposes, but the Imperial Institute Committee, having made a thorough inquiry as to the cause of this state of affairs, find that in great measure the prejudice is unjustified. Eastern Canadian spruce is superior to much of the inferior grades of Baltic redwood, but it is not easy to obtain the Canadian timber in the range of sizes and forms of manufacture required by the building trade.

Red Pine.—This wood closely resembles Baltic redwood, with which timber it comes into sharp competition. Exports to the United Kingdom have diminished in recent years owing to the competition of the Baltic wood, but the Committee point out that if regular supplies are available from Canada, at competitive prices, good quality red pine would be readily acceptable in this country as a substitute for the Baltic wood.

Yellow Pine.—This valuable timber (known in Canada as white pine) has a fine reputation in this country. The Committee consider that, with satisfactory prices, an extended market should be possible.

The prospects of *Eastern Hemlock* in this country are not considered good on account of the relatively inferior

quality of this wood as compared with the western hemlock of British Columbia.

The Committee conclude that the technical qualities of Eastern Canadian timbers are such as warrant a far larger use of the woods in this country than obtains at present, but they emphasise the fact that if Canadian softwoods are to compete more successfully with European timbers it is important that they should be well seasoned, and that the sawn lumber should maintain a high standard of manufacture and accuracy of measurement. The timber should also be available in as full a range of sizes as is possible.

H. D. SEARLES-WOOD [F.], *Vice-President*.

W. E. VERNON CROMPTON [F.].

DIGBY L. SOLOMON [A.], B.Sc.

The R.I.B.A. Visit to Greenwich Hospital

Through the courtesy of Mr. A. N. Smallwood, Director of Greenwich Hospital at the Admiralty, and the President of the Royal Naval College, Admiral Sir Frederick Tudor Tudor, K.C.B., etc., members of the Institute and their friends—forming a party of about fifty in number—were afforded the opportunity of paying a special visit to this famous group of buildings on the afternoon of Saturday, 22nd July.

The arrangements were made by the Art Standing Committee, and the visitors were met at the King William Street rendezvous at three o'clock by Mr. T. C. Agutter, F.R.I.B.A. (Civil Engineer of the Royal Naval College), who afterwards conducted them over the buildings.

Having assembled the party in the anteroom beneath the chapel, Mr. Agutter gave a brief account of the architectural history of the Hospital, and in doing so expressed his obligation for many of his facts and dates to Mr. A. D. Sharp, who had read a paper before the Greenwich Antiquarian Society on his researches among the archives at the Record Office and elsewhere. Mr. Sharp's investigations have thrown much light on various obscure points connected with the history of the Hospital, and shown that several accepted beliefs relating to the authorship of certain parts of the structure are at least open to question. When it is remembered that from first to last nine or more architects were employed on the buildings—and that some of them were engaged concurrently—it is not altogether surprising that error and confusion should have resulted with regard to this matter.

Greenwich Hospital, as it is commonly called, is now used as a residential college by officers qualifying for specialised branches of the Royal Navy. It occupies the site of an old royal palace built in 1433 by Humphrey, Duke of Gloucester, and called by him "Placentia." Judging from an old print which was shown to the visitors, it seems to have resembled somewhat the palace at Hampton Court. Of this vast establishment—in which Henry VIII and his daughters, Mary and Elizabeth, were born—all

that remains to-day is a small brick-built crypt situated beneath the Queen Anne Court.

The palace continued in use as a royal residence up till the time of Charles I, who, indeed, only left it for the field of battle during the Civil War. With the establishment of the Commonwealth it was reserved as a palace for the Protector, but it is not certain whether he ever occupied it. Owing to the unsettled conditions produced by the conflict between the King and Cromwell, the building was neglected and plundered of its treasures. When Charles II returned from exile he found it in so ruinous a state that he decided to demolish it and build himself an entirely new one.

Inigo Jones is sometimes credited with the design of the new palace; but as he died some ten years before the project was thought of, reasonable grounds exist for doubting whether he could have done so. It is more probable that John Webb was the architect, and that from among Jones's papers he selected an unexecuted design which he adapted to his purpose.

The King's grandiose scheme remained unfinished for many years, and when building operations were ultimately resumed, in 1695, they were directed towards completing the structure and adapting it for use as a seamen's hospital, in fulfilment of the desire of Mary II, who had died in the previous year. It was at this stage that Wren—who was then 63 years of age—was nominated surveyor for the new undertaking, the duties of which office he discharged gratuitously "with great pleasure and cheerfulness." Nicholas Hawksmoor, his pupil, was at the same time appointed as "clerk and assistant to the surveyor" at a salary of £50 per annum. Wren's instructions were to build another court "answerable" to the existing one, and to include in the scheme the Queen's House which Inigo Jones had erected on the south of the site. The masterly lay-out which he produced is justly held to be one of his greatest feats of planning.

A visit to the Painted Hall preceded an inspection of the Queen's House—now part of the naval boys' school—where the party was received by the superintendent, Captain E. M. C. Cooper-Key, R.N., M.V.O., whose kindness in showing the visitors over the building was duly acknowledged by Professor Simpson.

Mr. Agutter then conducted the party through the Hospital grounds and into Greenwich Park, where members and their friends became his guests at tea. Professor Simpson thanked Mr. Agutter for his personal explanations and guidance. The official visit to the Hospital having thus been brought to a close, most of the party proceeded to the Observatory, which they were privileged to go over by special permission of the authorities.

FREDERICK CHATTERTON [F.].

NEW CONDITIONS OF CONTRACT.

Mr. John Slater, Past Vice-President of the Royal Institute of British Architects, and Chairman of the Practice Standing Committee, has been appointed as the Architect Member of the Tribunal which, under the Chairmanship of Sir Wm. Mackenzie, K.C., will have the deciding voice on any points on which the Conditions of Contract Conference are unable to agree.

Obituary

SIR THOMAS BROCK, K.C.B., D.C.L. [*Hon. Associate*].

It was with great regret that his many Institute friends heard of the death of Sir Thomas Brock, on the 22nd August. Born at Worcester in 1847, he was, as Sir Aston Webb states, in a sympathetic notice of his death in *The Builder*, employed in early life as a modeller in the Worcester China Works. He came to London in 1866, and was speedily engaged, without salary for the first twelve months, in the studio of F. H. Foley, R.A. He also joined the Royal Academy Schools, and in 1869 carried off the Royal Gold Medal for Sculpture, the subject set for competition being that of Hercules strangling Antaeus.

The winning of the Gold Medal was the first step in Sir Thomas' long and distinguished career, which was expressed in part by his successive exhibits in the summer exhibitions at the Royal Academy. But to architects and, indeed, to the public generally, the work with which his name will always be most prominently associated is the sculpture of the national memorial to Queen Victoria. "He threw all his energy, experience and skill into the work," says Sir Aston Webb, "a colossal one for one brain and pair of hands to undertake. It took him the best part of twenty years; happily, he lived to see it completed, with the exception of two very large bronze groups over the fountains at the base, which are now being cast, and should shortly be ready for fixing."

The record of Sir Thomas Brock's work is necessarily with so strenuous a worker a long one, and covers the whole gamut of a British sculptor's art, in which work connected with architecture does not take a conspicuous part. He did a very large number of portrait busts, of which those of Queen Victoria and Lord Leighton are generally considered to be the most successful. Sir Aston Webb states that he was also responsible for the statue of the Prince Consort for the Albert Memorial at Kensington. He did many recumbent figures, and there are equestrian statues in the Tate Gallery, "Moment of Peril," depicting an Indian warrior on horseback confronted by a huge serpent (1881), which was purchased for the Chantrey Collection, and a large ideal figure of the Black Prince (1902), which was erected at Leeds. He was also responsible for the head of Queen Victoria on the 1897 coinage. "A man possessing a great and highly accomplished talent, his half-century of strenuous work, it is safe to say, will rank high amidst that of his contemporaries and immediate successors. Sensibility in modelling, power in discerning character, sympathy and grace in treatment without loss of strength, combined with great technical ability, are no mean gifts," a writer sums up his artistic qualities and position in *The Times*.

Sir Thomas Brock married in 1869 (the year in which he won the Royal Academy gold medal) Miss Hannah Sumner, of Nottingham, who survives him.

THE LATE MR. COLLINGS BEATSON YOUNG.

Collings Beatson Young [*Licentiate*] died after an operation on the 13th instant at the age of 64 years.

He was articled in 1874 to Mr. Henry Lovegrove, and after some years as assistant in various offices he started in practice in London and carried out the following works: the Bath Club, Dover Street, W., the Savoy Hotel (original building); House, Weybridge Island; the planning and construction of the Royal English Opera House (elevations and decorations by Mr. T. E. Collcutt); extension of Bentley Priory, Great Stanmore; Glenthorne, Great Stanmore; offices, Budge Row, E.C.; alterations Hyde Park House, for Sir H. W. Layland, M.P.; additions to Wandsworth Town Hall, and many alterations to houses and business premises. Mr. Young passed the District Surveyors' Examination in 1906 and was elected a Licentiate in 1910. Through backing up a relative in a lawsuit he failed. He afterwards rendered most able and useful assistance to many architects, being for some time with Mr. Delissa Joseph, and for twenty-three years with Messrs. G. Elkington and Sons. Recently he has been with Messrs. Lovegrove and Papworth. He lived at Ilford, and gave great attention to Church matters.

During the war he was Pioneer Officer in the 1st V.B. Essex Regiment, and his only surviving son was a prisoner in Germany for some years.

HENRY LOVEGROVE [F.].

BRYCE, JOHN, elected a Fellow in 1879, retired 1908, died 22 August 1922.

SEARLE, SEPTIMUS CECIL, elected an Associate in 1879, died 16 September 1922.

CHEEK, CYRIL CLEFF, elected an Associate in 1916

VISIT TO WESTMINSTER HALL.

At the invitation of Sir Frank Baines, of H.M. Office of Works, the Art Standing Committee of the R.I.B.A. have arranged a visit to Westminster Hall to inspect the famous roof on Saturday, 14th October 1922, at 3 p.m. The work on the roof is now completed, the scaffolding will be removed shortly, and an opportunity for examining the work is not likely to occur again for many years. Members and their friends who wish to take part in this visit should apply to the Secretary R.I.B.A., by whom tickets will be supplied.

Exhibition of Contemporary British Architecture

The following arrangements have been made for the organisation of the Exhibition of Contemporary British Architecture to be held in the galleries of Royal Institute from 1 November to 9 December 1922:—

1. All architects in the British Empire are invited to submit their work.
2. Work that has already been exhibited elsewhere will not be excluded.
3. Exhibits must be confined to works executed or illustrations of works projected since the beginning of the twentieth century.
4. All exhibits must be framed and may be glazed.
5. There is no limit to the number of works which may be included in one frame.
6. Models will not be accepted for exhibition.
7. Exhibits may consist of photographs, elevations, perspective drawings, and small scale plans. The exhibitor may choose whether he will send any or all of these. Photographs of drawings are admissible.
8. As the available wall-space is very limited it is anticipated that not more than 15 square feet of wall-space (inclusive of frames) can be allotted to any exhibitor.
9. Charges for packing and transport of exhibits to and from the exhibition must be defrayed by the exhibitors.
10. An insurance policy will be taken out for the exhibits while they are in the custody of the R.I.B.A., but the R.I.B.A. will incur no legal liability for loss or damage.
11. The last day for the receipt of drawings and photographs will be 7 October 1922.
12. All exhibits not accepted must be removed by exhibitors not later than 22 October 1922.
13. The exhibition will be open to the general public (free), between the hours of 11 a.m. and 6 p.m.
14. There will be a Press view on 30 October, and the private view and opening will take place on 1 November 1922.*

Before forwarding their drawings and photographs to the R.I.B.A., intending exhibitors are requested to apply to the Secretary R.I.B.A. for a copy of a printed form which they are asked to complete and enclose with their exhibits.

* The above particulars were published in the JOURNAL on 22 April.

Bye-laws with Respect to New Streets and Buildings

The Secretary of the Ministry of Health has issued the following letter to Councils of Boroughs (outside London) and Urban and Rural Districts :—

MINISTRY OF HEALTH,
WHITEHALL, S.W.1.

1 September 1922.

BYE-LAWS WITH RESPECT TO NEW STREETS AND BUILDINGS.

SIR,—1. I am directed by the Minister of Health to bring to the notice of your Council the urgent importance of revising any bye-laws in force with respect to new streets and buildings if this has not recently been done.

There is still a large number of local authorities who for many years have not altered their bye-laws, which in consequence are antiquated.

It cannot be too strongly emphasised that a local authority are not warranted in retaining bye-laws which may hinder private enterprise and are not really required for safety or sanitation.

At present local authorities are able to give some measure of relief from inelastic bye-laws by consenting to a building under section 25 of the Housing, Town Planning, &c. Act, 1919. It has to be remembered, however, that this provision is only temporary, and, in any event, is not a satisfactory method of affording permanent relief. Moreover, the section deals only with buildings for human habitation, not with commercial or industrial buildings.

2. The model bye-laws as to new streets and buildings have been frequently revised, particularly in the light of the experience of local authorities; and the present models are markedly different from the earlier ones. While they secure all the safeguards which local authorities, in the interests of the community, can properly require under the authorising statutes, they afford a wide margin of elasticity; and the Minister would urge local authorities who have not already done so to revise their bye-laws on the lines of the latest models.

The Departmental Committee on Building Bye-laws recommended that all bye-laws with respect to new streets and buildings should be reviewed at least every ten years; the Minister is inclined to think that this task should be undertaken at even shorter intervals in order that the local authority may be quite sure that their bye-laws provide adequately for modern requirements.

3. The Minister will be glad to know what measures are taken in this matter by your Council, if their bye-laws have not been revised since the beginning of 1914; and his officers will be glad to render any assistance which they can in any revision which is undertaken.

I am, Sir,

Your obedient servant,
A. V. SYMONDS,
Secretary.

Copies of the model bye-laws for drafting purposes can be obtained without charge from the Ministry. Extra copies of this circular and of the model bye-laws can be bought directly

or through any bookseller from H.M. Stationery Office at the following addresses :—

Imperial House, Kingsway, London, W.C.2 ;

28, Abingdon Street, London, S.W.1 ;

37, Peter Street, Manchester ;

1, St. Andrew's Crescent, Cardiff ;

23, Forth Street, Edinburgh.

The model bye-laws on this subject are :—

Series IV : The full urban model, for large towns, industrial areas, and other thickly populated districts ;

Series IVa : The rural model (new buildings and certain matters in connection with buildings only) intended primarily for rural areas ;

Series IVc : The intermediate model, for parts of rural districts which have become urban in character, or for sparsely populated and residential urban districts, small towns, etc.

FEEs PAYABLE TO ARCHITECTS IN CONNECTION WITH STATE-AIDED HOUSING SCHEMES.

In view of the terms of Clause E (4) of General Housing Memorandum No. 61, issued by the Ministry of Health, the question of the setting up by the Royal Institute of British Architects of a tribunal to deal with applications is under consideration. All Architects who wish to obtain the support of the Royal Institute under this Clause are requested to write at once to the Secretary, R.I.B.A., stating whether they are members of the R.I.B.A. or of one of its Allied Societies or of the Society of Architects, or whether they are unattached to any Architectural Organisation, and giving brief particulars of the cases in which they desire to be supported.

All applicants will be informed in due course if it is found to be necessary to require the payment of any fees to the Tribunal.

IAN MACALISTER,

Secretary, R.I.B.A.

Competitions

RAFFLES COLLEGE, SINGAPORE.

The President of the Institute has appointed Mr. John Begg, F.R.I.B.A., as Assessor in this Competition.

AUCKLAND WAR MEMORIAL COMPETITION.

The Secretary of the Institute has received the following cable from the Promoters of the above Competition :—"Auckland Competition, all prize winners resident New Zealand, Jury's report and photos winning designs being forwarded early date, President Institute Architects congratulates Architectural Association, three prize winners its students—Gunson."

Examinations and Scholarships

BOARD OF ARCHITECTURAL EDUCATION. R.I.B.A. SPECIAL WAR EXAMINATION.

The Special War Examination will be held for the *last time* from 11 to 15 December 1922 inclusive. Applications, accompanied by the necessary testimonies of study and entrance fees, must be submitted by 4 November 1922. Candidates who fail to satisfy the Examiners in this examination will be required to take the ordinary examinations of the Royal Institute if they desire to qualify as candidates for the Associateship.

EVERARD J. HAYNES,
Secretary to the Board.

BUILDING SURVEYING.

Examinations for Certificates of Competency to act as District Surveyor under the London Building Act, 1904, and as Building Surveyor under Local Acts and Authorities, will be held in London on the 25th, 26th and 27th October 1922. Applications will be received until the 7th October. Full particulars and forms of application may be obtained from the undersigned.

IAN MACALISTER,
Secretary, R.I.B.A.

R.I.B.A. ARCHIBALD DAWNAY SCHOLARSHIPS, 1922.

In accordance with the terms of the will of the late Sir Archibald Dawnay, the Royal Institute of British Architects have awarded, for the first time, two Scholarships, each of £50 per annum for two years, to Mr. E. U. Channon, Architectural Association, and Mr. D. J. A. Ross, Robert Gordon's Technical College, Aberdeen, and one Scholarship of £25 per annum, for two years, to Mr. C. S. White, Architectural Association. The Scholarships are intended to foster the advanced study of construction and the improvement generally of constructional methods and materials and their influence on design.

EVERARD J. HAYNES,
Secretary, Board of Architectural Education.

Members' Column

Members, Licentiates, and Students may insert announcements and make known their requirements in this column without charge. Communications must be addressed to the Editor, and be accompanied by the full name and address. Where anonymity is desired, box numbers will be given and answers forwarded.

OFFICE TO LET.

ASSOCIATES have small furnished office to let in Bedford Row, with use of telephone.—Apply Box 2192, c/o The Secretary R.I.B.A., 9 Conduit Street, W.1.

MR. A. E. EBERLIN.

MR. A. E. EBERLIN, M.C., A.R.I.B.A., has opened an office in Park Chambers, Park Row, Nottingham, in collaboration with Messrs. Stockdale Harrison and Sons, A.S.R.I.B.A., of Leicester.

"DAILY MAIL" IDEAL BUNGALOW COMPETITION.

LICENTATE R.I.B.A. offers to prepare Perspective in accordance with the conditions on Competitor's own Drawing; special fee by arrangement.—Box 1592, c/o Secretary, R.I.B.A., 9 Conduit Street, W.1.

PRACTICE FOR SALE.

MANCHESTER architect, A.R.I.B.A., contemplates sale of his practice; excellent offices and connection. Would also part with his house in country which carries with it a country clientele.—Apply Box 31, c/o Secretary R.I.B.A., 9 Conduit Street, W.1.

PARTNERSHIPS.

ARCHITECT, A.R.I.B.A., young, seeks appointment with view to Partnership. London preferred. Small capital.—Apply Box 300, c/o Secretary R.I.B.A., 9 Conduit Street, W.1.

FELLOW, with practice in North of England, wishes to purchase small practice in London district or Manchester. Factory work preferred; would consider partnership.—Reply Box 334, c/o Secretary R.I.B.A., 9 Conduit Street, W.1.

ARCHITECT and Surveyor, with very old-established practice and good Offices in the centre of Kent, offers to act in conjunction with London architects who may have large or small works in or around this district.—Apply Box 234, c/o Secretary R.I.B.A., 9 Conduit Street, W.1.

ASSOCIATE, 20 miles out of town, desires London address. No actual office accommodation required.—Reply Box 6922, c/o Secretary R.I.B.A.

APPOINTMENT VACANT.

THE Secretary of the R.I.B.A. has received the following telegram from Messrs. Little, Adams and Wood, of Hong Kong:—
"Kindly select for us energetic competent essentially real architect. Businesslike. Able to take charge. Designer essential. Single. Age under thirty. Efficiently vouched for professionally and personally. Salary 350 Mexican dollars monthly. Yearly increment twenty-five dollars. Three years' engagement. Free quarters or allowance fifty dollars. Free passage. Early partnership prospects. Refer selected candidate Pollock Lloyd's Avenue for engagement.—LITTLE ADAMS & WOOD." Any architect desirous of applying for this post should write at once to the Secretary, Royal Institute of British Architects, 9 Conduit Street, W.1.

APPOINTMENTS WANTED.

ASSOCIATE (30), with substantial capital, 12 years' varied experience, town and country, desires Manager's post with view to Partnership. Energetic and keen business man. Good designer and thorough knowledge of details and practical work, having acted as clerk of works on several big city jobs. Articled pupilage and trained in A.A. schools. Travelled abroad and held important Government post in East. Highest references.—Apply Box 50, c/o Secretary R.I.B.A., 9 Conduit Street, W.1.

ASSOCIATE (38) desires post as chief assistant or otherwise in London district. Experienced in all branches. Excellent references. Part or whole time. Moderate salary.—Apply Box 100, c/o Secretary R.I.B.A., 9 Conduit Street, W.1.

ASSISTANCE rendered by A.R.I.B.A. at own office or otherwise, by arrangement. Would be willing to become Chief Assistant in a good London office or join another Architect with a view to Partnership.—Apply Box 1392, c/o Secretary R.I.B.A., 9 Conduit Street, W.1.

Arrangements have been made for the supply of the R.I.B.A. JOURNAL (post free) to members of the Allied Societies who are not members of the R.I.B.A. at a specially reduced subscription of 12s. a year. Those who wish to take advantage of this arrangement are requested to send their names to the Secretary of the R.I.B.A., 9 Conduit Street, W.1.

Dates of Publication.—1921: 12th, 26th November; 10th, 24th December. 1922: 14th, 28th January; 11th, 25th February; 11th, 25th March; 8th, 22nd April; 6th, 20th May; 3rd, 17th June; 15th July; 19th August; 23rd September; 21st October.



BANK OF ENGLAND (FIRST DESIGN). Exterior view from N.E.

Life and Work a Century Ago

An Outline of the Career of Sir John Soane, R.A., F.R.S., F.S.A.

Professor of Architecture in the Royal Academy
 Founder of the Sir John Soane Museum, etc., etc.*

BY ARTHUR T. BOLTON [F.], F.S.A., CURATOR OF SIR JOHN SOANE'S MUSEUM

SPEAKING to architects it should not be necessary to explain who the architect and owner of No. 13, Lincoln's Inn Fields was, nor why he should have established a centre for architectural study and research.

A century, however, is a good while ago, and so it seemed to me that it would be interesting if I endeavoured to carry your thoughts back for that distance of time and, so far as it is possible, recall the times and circumstances amidst which John Soane lived and worked. The Muse of History has many and strange ways of vindicating herself, but I shall leave to others any modern applications that his story may seem to suggest.

John Soane was born at Whitchurch, near Reading, in 1753, and came to London in 1768, the year in which the Adams began the Adelphi. Robert Adam (1728-1792) had returned from Italy January 1758 when Soane was five years old, and had therefore already been in practice in London for ten years. As Robert Adam died in 1792 the young man witnessed twenty-four years of Adam's career in London. We all agree in a general way that early impressions have a most important in-

fluence, and in the case of Soane there has been a good deal of misunderstanding, due to a failure to realise the conditions under which he lived and worked.

In a general way architects are all aware that the Georgian period is pretty sharply divided into an early and late style, and that this later period is known as Adam. Evidently, therefore, something in the nature of a revolution in taste was taking place at the very time that Soane came up as a young man to George Dance's office as a pupil. As a matter of fact, 1770 may be taken as a date when imitation became general, and from that time up to the opening of the great war in 1793, work in the Adam style was general.

Of course, it was not an unchallenged supremacy. There was the old Palladian School, relying on Inigo Jones and Wren in theory, but in practice really influenced by James Gibbs (1683-1754), the immediate leader before Adam. The church of St. Martin's in the Fields (1722-26) was a standard by which, as James Elmes has pointed out, a whole school judged current practice. Sir William Chambers, R.A., was engaged in 1769 in founding the Royal Academy, with Sir Joshua Reynolds as first president. He was bitterly opposed to Adam innovations, as well as to the Greek influence of James Stuart (—1788), who in 1762 published

* A paper read before the Leicester Society of Architects, 3 Feb., 1922, by Arthur T. Bolton [F.], F.S.A., Curator of Sir John Soane's Museum.

the first volume of the *Antiquities of Athens*. Neither Adam nor Stuart became members of the Royal Academy. In 1772, however, a new star appeared, James Wyatt (1746-1813), securing with his Pantheon in the Oxford Road (1770-72), at one bound, an almost European reputation. The Academy practically at once elected him as a member, and he was from this time the leading rival of Robert Adam, as James Stuart carried out very little actual work.

Young Soane was almost at once introduced into this circle of the leading architects of the day. George Dance, R.A., his first master, was son of old Dance, who had built the Mansion House, in despite of the opposition of the influential circle that surrounded Lord Burlington at Burlington House. Dance was a master carpenter, or shipwright, but he had evidently determined that his two sons should have all the advantages that education and study abroad could give.

George and his elder brother, who was a painter, were in Rome together, and from a letter home to his father we learn that George competed for the prize at the Parma Academy, because he distrusted the Scotch influence at Rome, evidently referring to Robert Milne's (1734-1811) recent success (1758). Dance was successful at Parma, and was elected a member of that Academy, as was also Soane later on.

Dance succeeded his father as City architect, and had as his chief assistant a certain James Peacock, a man of some character, and possessed of an analytical power of thought.

It seems most probable that it was through Peacock that young Soane was brought to London. The exact facts are not known, but I think it likely that, the boy's father being a master bricklayer or small builder, Peacock may have come across him on some work and early recognised his promising abilities. The boy was handsome, quick, enthusiastic, and possessed of considerable charm of manner, as well as of unlimited power of work. He was to suffer as time went on from certain counterbalancing qualities, but, if he made certain lasting enmities, he held lifelong friendships with equal tenacity. Many of the current stories about Soane appear to be very idle tales, such as become current about all men who arrive at high distinction.

Soane only remained two years with Dance because he thought he recognised in his master too much of the artist and too little of the practical architect. He accordingly arranged to transfer himself to Henry Holland, jun., son of the well-known builder, who had been employed by Robert Adam and other architects.

The friendship, however, with the Dances remained lifelong, and it would even appear that the master was inclined to depend on the brilliant pupil. In 1802 Dance writes to Soane about a house, which he is very keen on, but it is making him miserable, and "would you let me look at your plan (Tyringham). I want to steal from it."

Dance in certain crises in Soane's life writes to his former pupil in a tone of affectionate warning, which proves the permanence of their relationship. Almost the last act of Soane's life was that, at the age of 83, he travelled down to his master's son's house to arrange for the purchase of the Dance Cabinet, now in the Museum, and containing his master's original drawings. As an architect George Dance, R.A., has been, I fancy, rather misunderstood. He was an eclectic, with a tendency to seek after new forms of expression. The position, always a dangerous one, was especially so in his case, because he certainly lacked concentration in his pursuit of architecture. Ultimately he gave it up, and produced the famous series of portrait drawings, by which he is still known. His masterpiece was Newgate Prison (1770) one of the most expressive buildings ever built. The origin of the design seems to me to trace back to San Michele's work, and to be the result of a purposeful elimination of features. I do not personally regard it as derived from Piranesi's *Carceri* studies, as has been suggested. Another powerful design is the interior of the Great Room at Lansdowne House, which, though actually carried out by Robert Smirke, owes its special features to Dance. It is not clear whether Soane actually worked on the Newgate design, but pending its partial rebuilding after the Gordon Riots, in 1780, Soane, who had just returned from his travels, had meetings with Dance and Peacock "about the Newgate business," which seems to show that he had probably been connected with it before.

Although Soane was only fifteen when he came to London, and was quite poor, he began apparently at once to buy books, at first chiefly on mathematical subjects. There are in his library books with his name and date, the earliest being "Whitechapel, 1767," possibly a record of some early trip to London. This habit of buying books continued to his dying day, so that at his death he had 8,000, of which 4,000 deal with architecture and the allied arts.

With Henry Holland Soane seems to have been very happily placed, and I imagine that he must have arrived at a good position in the office. He speaks of being engaged on Claremont, an important house of the period, then building for the famous Lord Clive (died 1774), on an estate which had belonged to the late Prime Minister, the Duke of Newcastle. There was an oblong room, which by columns was formed into an oval with an elliptic domed ceiling, and this was apparently designed by Soane, while with Holland. The little façade in Whitehall, next to the Treasury, added by Holland to an older house, has much in common with Soane's ideas and work. Particularly the pupil admired the suite of rooms at Carlton Palace, built by Holland for the Prince of Wales (after George IV.), in 1786. On the practical side Soane came in touch with building and surveying for prices, and began to collect

priced bills and data, which ultimately led to his becoming an acknowledged expert in such matters. Only his amazing energy and power of work could have enabled him to deal successfully with so many subjects, as his varied official and private duties later on required. He joined the newly started Academy Schools, and this brought him into touch with Sir William Chambers, R.A., the all powerful Treasurer. Somerset House was begun in 1776, and was hardly completed at the time of Chambers' death in 1796.

Somerset House, of course, has never been really completed. The Academy was transferred there in 1780, the year in which, as I have mentioned, Soane returned from his travels. There was some trouble with settlements before Chambers's death, and Dance and Soane were called in as referees. I want you to realise the nature of the influences to which Soane was subjected, because it will enable you to understand the originality of the Bank, the first part of which was completing in 1796.

At the Academy Soane won, in 1772, the Measured Medal for a drawing of the façade of Inigo Jones's Banqueting House in Whitehall. He then, in 1774, competed for the Gold Medal, but by a mistake in the day of delivery this first design was disqualified. Nothing daunted he tried again, and won the prize in 1776. While engaged on this design one of his companions arranged a birthday party on the river. Soane at the last moment excused himself, owing to the unfinished state of his drawings, and as one of the party, who could not swim, was drowned, Soane, who was equally unqualified, considered that this devotion to his work had saved himself from a watery grave. Later on in the same way a fear that he would not be able to do adequate work led him to give a casting vote against extending the voyage of himself and his party from Sicily to Athens. This was particularly unfortunate as it turned out, but it illustrates the practical side of his character and his determination to secure lasting results, based on serious work, from his opportunity of travel.

The night, 10 December 1776, on which Soane received the Gold Medal was that on which Sir Joshua delivered the seventh of his thirteen famous "Discourses." Fifty years later a fellow student, who had been present, recollected how full of praise, encouragement, and hope had been the words of Reynolds to the winner. Sir William Chambers was as much pleased, and introduced young Soane to the King, and, before Soane's departure, 18 March 1778, gave him a copy of a long letter of advice, which in fact is an outline of Chambers' own attitude towards architecture, as we see it at length in the *Civil Architecture* (1759), so well known to all students.

Despite this powerful orthodox influence Soane was responsive to the opposing school of Robert Adam, James Wyatt, George Dance, and Henry Holland.

The companion with whom he set out was Robert Brettingham (born 1750), a nephew of Mathew (died 1778?), who may be described as a Palladian of the earlier school of Burlington, Kent, and Ware. They passed through Paris, and Soane's passport for Italy is signed by Louis XVI, as that for his return was by the famous Cardinal Bernis, the French Ambassador at Rome.

King George's well-known interest in "My Academy" gave a prestige to the early travelling students, which must have been of great service. Consequently at Rome Soane was aided by Sir William Hamilton, the Bishop of Derry, afterwards first Marquess of Bristol, and by Thomas Pitt, afterwards Lord Camelford. The circle of friends at Rome, however, did not distract Soane's resolute attention to work. Forty years later his son John, writing from Rome (1819), notes the extraordinary labours of Taylor and Creasy, and adds that no one had done so much work since his father's own day. Soane, in fact, measured the Pantheon and other great buildings, besides making a most complete and detailed set of drawings of the Temple at Tivoli, which Dance had also previously studied.

All his life Soane was distinguished by a certain power of mind, a difficult quality to describe, or analyse. This was a link with the witty, though eccentric, Bishop of Derry, and they became close friends and travelled together. The association was valuable to Soane, who thus found himself in a society learned in the classics and in the history of art. With a party of gentlemen of position Soane, as a draughtsman, made a tour in Sicily and as far as Malta, but the expedition turned back before it reached Greece. This proved to be unfortunate, because Soane's actual first-hand knowledge of Greek work was limited to Paestum and the Sicilian remains, and he never had the advantage of seeing the Parthenon. What he saw, however, was enough to establish the Grecian Doric as a first favourite in his mind. This, combined with the influence of the Abbé Laugier's *Essai sur Architecture* (Paris, 1755) drew his mind still further away from the orthodox school of Sir William Chambers, R.A. Of the *Essai* to which I refer there are no less than eleven copies in the Soane, and I judge that it was Soane's practice to give copies to his favourite pupils. The idea of the book is a Puritan reformation of the Jesuit style that had prevailed in Europe during the times of Louis XIV and XV. It preaches the everlasting "return to nature," which in this case meant back to the earliest columnar form of building. The pure columnar order of the temple is to be used, without basements, domes, or composite features. The story is a very old one, but it requires to be recorded here because this influence ultimately led Soane into some of his most serious difficulties.

The young student should have been three years abroad, for which he was allowed £60 a year and



BANK OF ENGLAND (1792). View of the Bank Stock Office looking North, 1798.



INTERIOR OF THE PORTICO OF A PALACE FOR THE KING. Design dated 1821 and 1831.
Drawn by Joseph Gandy, A.R.A. Hung in the Model Room of the Soane Museum.



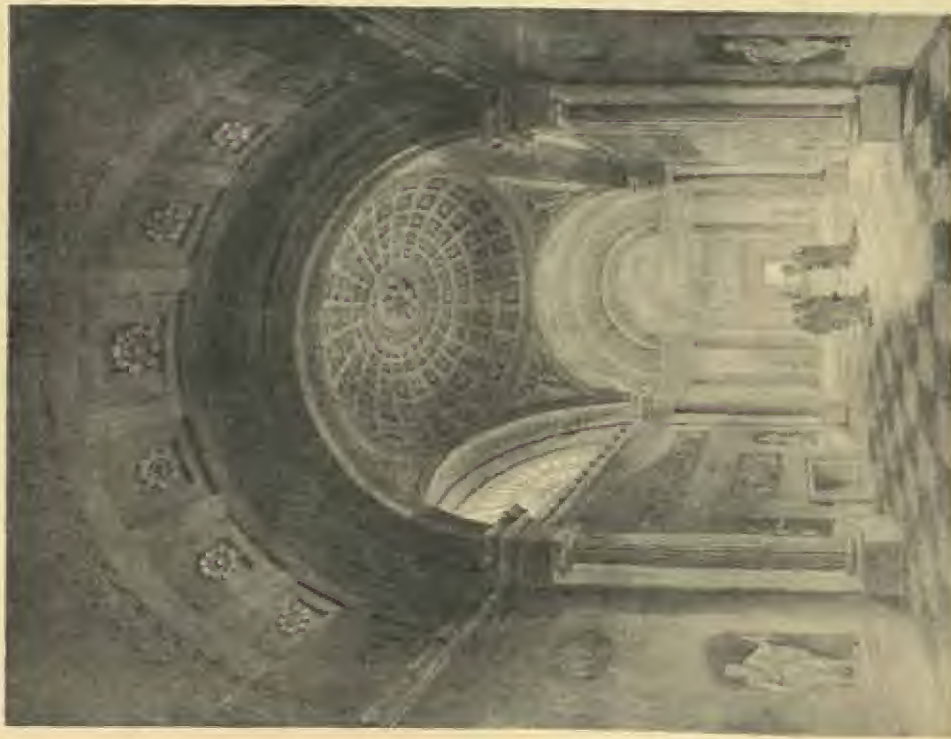
BANK OF ENGLAND. CONSOLS OFFICE.



THE BANK OF ENGLAND (CONSOLS OFFICE). Lecture Diagram



BANK OF ENGLAND. VESTIBULE, PRINCES STREET. Erected 1804.



VESTIBULE, HOUSE OF LORDS (1794 design).

the same sum for the journey out and back. Unfortunately, the Bishop, who had succeeded to the title and returned to England (1779), wrote urgently in 1780 to Soane inviting him to return at once to build him houses, both at Downhill in Ireland, and Ickworth in Suffolk. Soane, it may be remarked, was combining with his measured study of buildings in Italy the production of important designs. Thus he sent home and exhibited at the Academy a vast design for a British Senate House, and he obtained the particulars to compete for the Academic Medal at Parma. In the same way he had already made some designs for the Bishop. The temptation, thus addressed to him in 1780, when he had been away only two years, struck at the practical element in Soane's nature; the offer seemed to be the certainty of a secure position and a great career. He returned therefore in haste, abandoning plans of work at Vicenza, etc., and crossed over at once to Ireland, where he stayed six weeks with his patron. The Bishop, however, was a man of very variable temper, and the unfortunate student, burning to get to work, found himself dancing attendance on an amateur architect. All his life Soane was to suffer from a kind of nervous crisis or panic, known to his friends of this time as "Your fancies." Probably this tendency was exasperated by his habitual condition of overwork, but to a considerable extent it was constitutional. A great physician looking at his portrait (1829) by Sir Thomas Lawrence, P.R.A., remarked that it was "a suffering face." It can easily be understood therefore that Soane's patience now gave way, and he asked leave to return to England. He crossed over to the North and visited some of the friends he had made in Rome, and then returned to London to start unaided for himself.

The breach with the Bishop was final, conciliation was found of no avail, and the loss was great on both sides, as the patron got into hopeless difficulties and the architect lost a great opportunity. Soane, who looked back on his time in Italy as the happiest of his life, saying that "it passed like a dream," never forgave the Bishop. In writing his *Memoirs* in 1833, 53 years later, he sets it all out in detail. It was, of course, a thoughtless and wrong interference with the career of a brilliant student of great promise. On the other hand, Soane must have felt that he had departed from his strict duty in not fulfilling the three years, and thus at the end of his life he must, probably from some misconception of what a Professor of Architecture in the Academy could admit, have given currency to the idea that he went to Italy in 1777, making three years. The actual date I have established from his contemporary note books was, definitely, 18 March 1778. This day he was accustomed to keep and look back upon, often with some comment, contrasting his happiness then and at the moment of writing. It is also significant that he fixed 24 March for the presentation of the Gold Medal

in 1835, and also appointed it as the distribution day of his fund for distressed architects.

Soane's life is full of very human touches. A great fighter, he nevertheless felt deeply the opposition he raised, and he never entirely learnt to refrain from making public his misfortunes and grievances. He had that craving for sympathy which is at once a source of strength and weakness in the artist.

Indignant, but sorely depressed, Soane arrived in London, and proceeded to take rooms in Margaret Street, close to Portland Place, where James Adam was carrying on his great building scheme (1778-80). James Wyatt had built himself a house on land belonging to Lord Foley, whose great house blocked the southern end of Portland Place. Wyatt's house still exists, and during his lifetime (he died 1813) it was rather a centre for architects to settle round. Even as late as 1827 Sir Charles Barry moved to Foley Place from his first address in Ely Place, Holborn (1820).

The year 1780 was a time when great courage must have been needed to start a practice. The war had been a great disaster, the country was disturbed and uneasy, as the Gordon riots soon showed. The tottering personal rule of the King, through Lord North's Ministry (1770-82), could obviously not last much longer, and fresh men would be required if peace was to be re-established.

A subject of the day was the building of penitentiaries, the outcome of Howard's labours and crusades. Soane decided to compete for two, and chose as his motto "*Mihi turpi relinqui*," and ever after, in times of trial, he recalled the device as a watchword. Dance, for instance, writes to him "Remember your motto," on an occasion when his pupil stood in need of encouragement. Nothing came of Soane's effort, and he ever after avoided competitions. He could not, it is true, from his official position actually denounce them, but, as one of his friends pointed out, his practice showed his real beliefs in the matter.

About this time, however, the Eastern Counties, and Norfolk in particular, were doing well in agriculture. The friends Soane had made employed him on small house building and alterations, and he soon enjoyed a country practice, which only his indomitable energy enabled him to carry on.

His office hours were always twelve—7 to 7 and 8 to 8 summer and winter—and on his journeys to his works he used to cover great distances on horseback or driving. He records sometimes "passing through mountains of snow," travelling all night and day, in the intervals of hard work at home on his drawings. Much of his work was done on the same lines that Robert Adam had followed. Soane had a succession of superior mechanics, who acted as foreman and clerk of works in one, directing master tradesmen or individual labour, the work being often paid direct through himself. At

the same time the idea of quantities was beginning to be developed, because schedules of work were prepared and priced by the architect, forming a detail estimate. Selected tradesmen then offered for the work, establishing a schedule of prices, after which there was some kind of final measurement. It sounds extremely complicated, and led to boxes of papers, records of hours, work, and cash payments, and it seems to me that it was only possible at all with an architect of Soane's special gifts. It explains the gigantic troubles into which so many others fell, in regard to the cost of their work. In Soane's hands the work, despite all his alterations, and the fluid character of his changing design would come out at, or within, the actual estimate he had already given. He was exceedingly sensitive on the point of professional honour. When the first club, or early Institute of Architects, was being established, a sub-committee of Soane and Holland was appointed (1792) to draw up the definition of an architect, and the wording is the same as that which Soane had already given, in the preface to his book of designs published in 1788. He says: "The business of the architect is to make the designs and estimates, to direct the works, and to measure and value the different parts, he is the intermediary agent between the employer, whose honour and interests he is to study, and the mechanic whose rights he is to defend. His situation implies great trust; he is responsible for the mistakes, negligencies, and ignorancies of those he employs, and, above all, he is to take care that the workmen's bills do not exceed his own estimate. If these are the duties of an architect, with what propriety can his situation and that of the builder or contractor be united?"

Soane never varied from this high standard, which he repeats in his last writings. It seems to be the basis on which the modern profession of architecture has since rested.

It is worthy of note that Napoleon soon after in his Code established the responsibility of the architect in France. I imagine therefore that Delorme's delightful audacity is still in use across the Channel: "The architect should be careful in the choice of his client."

Soane therefore, undeterred by the difficulties of the times, pursued his work with such success that in five years he was paying his expenses. In 1784 he took a partner, who became the mainspring of his life for the next thirty years. Eliza Smith, who unfortunately did not live to become Lady Soane, was niece of George Wyatt, a builder of Albion Place, just across Blackfriars Bridge. The Wyatts were an immense family, and I do not know exactly what the relationship to James Wyatt was, but Soane and Wyatt were always great friends, and, on the sudden death of the latter, the widow depended upon Soane for help and assistance, being left wholly unprovided for.

Some money was inherited from George Wyatt in the form of house property, and the houses in Albion Place came ultimately to Soane. Four years later than his marriage began the real public career of the young architect, because, with the support of William Pitt, then Prime Minister, he was chosen out of fifteen competitors as architect to the Bank of England, in succession to Sir Robert Taylor.

It is impossible to deal with that subject here. I must just premise that the original Bank as built by Sampson had been extended by Taylor in the form of two low wings. The work consisted of single storey halls, very much like the interior of St. Martins in the Fields, and of similar lath and plaster construction.

Soane made a general survey plan of the existing building, and found that the wet penetrating under the lead roofing had rotted the main beams. He proposed the rebuilding of the eastern portion in fireproof construction, using stone, brick, and fireclay pots for piers, arches, vaults and domes. The first part was finished coincident with the death of Sir William Chambers, 1796. The destruction of Taylor's work was resented, but the crowning offence was the character of the new work. The favourite student of the Academy had kicked over the traces. Had not Sir William Chambers, in his last edition of the *Civil Architecture* (1791), triumphed over the early collapse of James Stuart's Greek attempts, and here is young Soane giving us flutes without fillets, flat antae in place of decent pilasters, together with indescribable incised lines and surfaces, the whole crowned by acroters unknown to Palladian tradition. The building, in fact, though not truly Greek, was a real pioneer of the Greek revival, which was not to become completely effective until after the great war (1793-1815) was over. The Bank is therefore a transition building of the greatest importance in the long chain of English architecture. The new interiors were even more objectionable to the older school. Taylor's Rotunda, decently dressed in the Orders, had been replaced by a naked piece of Roman-like building, with little more than fluted lines as surfaces of interest, and all the customary trimmings had been rudely scrapped. The New Bank made as much row, in fact, as a futurist might do, if he could, to-day.

Some wag rose to the occasion and produced a ballad in rhyme, headed "The Modern Goth." I cannot give it here, but it spoke *inter alia* of the building as "ribbed like loins of pork."

Soane was now up to the eyes in work, because in 1792 he had started a house for himself, No. 12, Lincoln's Inn Fields, which he occupied in 1794. In the latter year he was also ordered by a Committee of the House of Lords to prepare plans for a new House of Lords, thus entering upon a task which had been the goal of all leading architects of the eighteenth century. Here, again, I cannot enter upon a complicated and interest-

ing subject. It is only necessary to say in passing that the growing development of the war, which had begun in 1793, shelved Soane's design, and that when the matter became urgent in 1800, James Wyatt, who had succeeded Sir William Chambers as Surveyor-General, claimed the work by reason of his official position. This was a real hardship, and one of the great disappointments of Soane's life. At the moment, however, all seemed most promising. He had been elected A.R.A. in 1795, and, engaged on his great scheme, heard nothing of this libellous skit, and it might have remained unknown to him but for an accident which caused the explosion. The character of James Wyatt is not very easy to understand; probably the fact that he was taken to Italy at fourteen and had spent six years abroad, and had become suddenly famous at twenty-two, had something to do with a curiously detached attitude of mind. About this time he had completed the London Tavern, where he gave a dinner to members of the Architects' Club and his friends. Soane was not present, and Wyatt actually allowed copies of this skit to be placed on the table for each guest, and read it aloud himself for their amusement. Even so, this might have passed, but just then an important work was pending in Leadenhall Street. The East India Company had a long frontage, and, feeling that their surveyor, Jupp, was not adequate alone for a work of this importance, so near the Royal Exchange, the Bank, etc., required that designs should be invited from six leading architects. In addition to Wyatt, Holland, and others, Soane was included in the list of the chosen. Jupp thereupon took upon himself to urge the omission of Soane's name, and succeeded in his invidious request. It was inevitable, however, that this should become known, and Soane was naturally furious at what he considered was a monstrous slight. It will be understood that the Architects Club had been started as a very select body to which only medallists, or members of academies, like those of Rome and Parma, could belong. Jupp, however, had somehow been included, and pressure within the club was now brought to bear upon him to effect a reconciliation with Soane.

As is not infrequently the case, the trouble was thereby only inflamed. At this point the previous skit, and another, which purported to be an epitaph of Sir William Chambers, but was really a denunciation of Soane, were communicated to the victim, who also discovered that they were actually being advertised for sale in the newspapers. That settled the matter, and he decided to treat the publications as a libel. Two well-known counsel, whom he consulted, unwisely reported that the writings were actionable. Thus was opened up a series of unfortunate retaliatory attacks and counter attacks, which to a considerable extent clouded Soane's life, and consumed much of his precious time and energy. It further inspired him to write a notable pamphlet,

which Isaac D'Israeli considered as one of the most spirited of the time. That age was disfigured by disgraceful literary and personal attacks. No respectable paper to-day would admit the sort of thing that was then claimed to be "fair, accurate, and candid criticism." George Wightwick, writing after Soane's death, truly remarks that "no one was less indebted to public support," and there never was a case proving better that "ridicule fails to kill." It is a remarkable thing that Soane, amid all these and other repeated attacks, pursued his own path and ended ultimately as the venerable head of the profession, to whom all in 1835 joined in doing honour.

In 1802 Soane became a full member of the Academy, and in 1806, on the retirement of his master Dance, who had never even attempted to lecture, the pupil was elected Professor of Architecture.

The Academy had sadly fallen off under Benjamin West, the feeble successor to Reynolds. In this very year James Wyatt was President, West having been forced to resign. So disgusted, however, was the first architect president that he retired, and West was re-instated. Farrington, an indifferent artist, had succeeded to Chambers as dictator, and belonging to his party was old Robert Smirke, the painter, known now only as the father of that dull architect, Sir Robert, author of the British Museum, the Mint, and similar works.

A feud existed between old Smirke and Soane, apparently arising from the fact that Soane had turned young Robert out of his office as too hopeless a pupil. Elected Professor, Soane took up his new duties with characteristic energy and thoroughness. For three years he worked at his lectures, which he began as a course of six in 1810. In the fourth lecture, however, he commented upon the new Covent Garden Theatre, by young Smirke, opened in 1809. All that Soane said was a truism, but it served to ignite a latent powder-magazine. A hasty resolution of the Academy, conveyed to Soane with a complete lack of form and courtesy, was accepted as a challenge, and the Professor replied by promptly suspending his lectures. The struggle lasted for the next two years. Soane showed policy and discrimination, the extremists were overborne, and in 1812 the series of lectures was resumed, and continued to be given up to Soane's death. In 1809 he began the present Museum, by the building of the domed portion on the rear part of the next door house, No. 13. Soane had been struck by the absence of casts, drawings and models at the Academy for the use of students, and his love of collecting was greatly stimulated by this definite objective. In 1812 he rebuilt the front part of No. 13, and then moved into the new house, which was completed by 1814.

At this same period he was building Dulwich Gallery, with a mausoleum attached to the memory of

his steadfast friend, Sir Francis Bourgeois, R.A. All this time his two sons, John and George, had been growing up and had left Cambridge. Soane had entertained great visions for John; as early as 1800 he had started a country retreat, Pitzhanger, at Ealing, building a house of an architectural character, which his son might occupy as a young architect. Neither of the boys, however, had any talent or real inclination for architecture, and worse still, they had no definite ideas at all. They had vague literary aspirations, and that was all. Soane was bitterly disappointed; he envied the Wyatt, Cockerell and Hardwick families. Of all his own numerous pupils, the most gifted was Basevi, and it was tragic that he was not Soane's own son. Soane was a good master, and helped his pupils on leaving to travel, and in other ways. Their letters from abroad serve to illustrate his own character. Those of Basevi breathe a spirit totally lacking in the simultaneous letters of young Soane, and the contrast must have been bitter to the unfortunate father. The case of the second son became much more serious, and his conduct precipitated a crisis. Mrs. Soane died almost suddenly in November, 1815, only a year after the move to the new house; and after this shock life assumed a different aspect for Soane. Probably only his intense interest in architecture preserved his intellect and maintained his hold on life; but an element of sadness and loneliness now clouded too often the mind of the former bright, handsome and enthusiastic student. The house, so characteristic of himself, became a "purgatory," and he mostly resorted to the little official residence, which he had built in the grounds of Chelsea Hospital, where he held the post of resident architect.

Pitzhanger had been sold (Xmas, 1810) before his wife's death, on the definite failure of their hopes for the son; and Soane to the end regretted "the Gothic feasts and intellectual banquets" at which he had entertained the Academy Circle and so many of the leading men of the day. To a man of his active habits it was nothing to walk to Ealing and back; and the house, about six miles from Hyde Park Corner, served as the weekend resort of those days. The little house at Chelsea, so intimately associated with the last twenty years of Soane's life, has, unfortunately, been destroyed, but Pitzhanger, altered it is true, remains as a Public Library.

From this time his eyesight became a trouble, and in 1824 he had an operation for cataract. The fact that he was 71, however, did not diminish his interest in architecture. Since the death of James Wyatt (1813) the office of Surveyor-General had been reorganised under a political head, with three official architects—Nash, Soane and Smirke—to act as technical advisers and administrators. Nash depended on the favour of George IV, and the position was a very difficult one for

Soane. Parliament passed an Act (1818) to expend a million on building churches after the peace—the housing scheme of those days. Soane's advice, fixing the cost at £30,000 each, was rejected; and two classes, of £20,000 and £10,000 each, were established. He himself built two or three churches; but it is evident that he was half-hearted in the matter. The young man who most distinguished himself was the future Sir Charles Barry, R.A., who, returning from his grand tour in 1820, established himself in Ely Place, where Soane called upon him. I do not think that Soane's kindness to the young man has been at all realised. He afforded him early opportunities in connection with these churches; and my belief is that the companion with whom he started abroad, and the lady whom he married, both belonged to the Soane circle.

The year 1824 was a disastrous one for Soane, as a violent attack was made, by the rising school of Mediaevalists and Antiquarians, on the new Law Courts which he was building adjoining Westminster Hall. No architect to-day would, I think, regard Soane as having been wrong in his main position, which was that his Palladian façade, carrying on the main lines of William Kent's existing building, was better as a contrast to the Gothic north end of the Hall than an imitated new Gothic addition could have been. Unfortunately Soane wavered, and put himself in the wrong by offering to Gothicise his classic design, which was already nearly completed. A committee of the House of Commons was appointed, a long wrangle ensued, accompanied by unlimited abuse of the architect, and a ridiculous decision was finally arrived at. The plan was spoilt by pulling down and setting back the front block, and an amateur Gothic design, of which Soane washed his hands, was substituted for his own Palladian façade.

Probably failing health accounted for another unfortunate affair over the new Board of Trade and Privy Council offices in Whitehall. Someone blundered over the setting out, and the building could never be completed. In 1844 Barry, after Soane's death, successfully recast and completed the building as the present Treasury, and practically nothing remains of Soane's design.

Soane's masterpiece, the Bank, was now about completed, the Threadneedle façade being the last part to be undertaken. Thirty-five years had elapsed since his appointment, and yet the great work has a unity which gives no idea of the series of additions and transformations by which it assumed its final form. There is in existence a letter from Allan Cunningham, the author of the *Lives of British Architects, Painters and Sculptors*, in which he refers to Soane "as the most original British architect since Vanbrugh." His work has, in fact, character, it arouses opposition, not so great, of course, as was the case at the time, but sufficient to prove its

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possession of that quality. In addition, the work is always refined and never vulgar. The student should, therefore, examine it with respect and attention, and decide for himself what it may be that he himself finds to be lacking, from the point of view of the highest standard of the old masters. The last work of Soane was the State Paper Office, of 1829-1833, in St. James's Park, now no longer existing. It shows the definite influence of the new star then rising, as it belongs to the Astylar Italian, which Barry was then introducing at the Villa Attree, Brighton, and the Travellers' Club, in Pall Mall. The career of Soane thus runs through from Adam and Chambers to Barry. Born under George II, he lived through the long reign of 60 years of George III, through George IV and William IV, the last of whom knighted him in 1831, and his death took place only five months before the accession of Queen Victoria.

Wren spent 35 years in building St. Paul's, but Soane was 45 years architect to the Bank of England, retiring in 1833.

After his retirement Soane gave increased attention to authorship. His first book came out, while a student, in 1777, and after a variety of trials, for writing was not easy to him, he brought out his chief work, the quarto *Description of the House* (1835-36). His pupil, C. J. Richardson, was the illustrator, and George Bailey, who had been quite 30 years in the office, was probably the amanuensis. These two old pupils remained with him to his death, and Bailey became the first Curator of the Museum (1837-60). In all something like 50 pupils and assistants had been in the office, and several now held good positions in the profession. Nash had gone down in a cloud of official and Parliamentary censure, and it was felt that Soane's great services and high

standard of professional conduct deserved recognition. Remembrance of former strife was put aside, and it was resolved to present a Gold Medal to Sir John Soane as head of the profession. This event, which Soane recognised as "a ray of sunshine gilding the close of his life," took place on 24 March 1835 at his house, when Sir Jeffrey Wyattville, R.A. (architect of Windsor Castle), presented the medal, and Barry, Donaldson, and others of the Committee, together with 300 subscribers, were present. To acknowledge and record this happy reunion Soane gave £5,000 as a fund for distressed architects' widows and children, the income to be annually distributed on the same day and in the same place.

This represented in part the continuance of the private assistance he had given himself for very many years. The extent of his charity was unknown, but it was realised that it was very considerable.

Sir John Soane died, at the age of 84, on 20 January 1837, in his house in Lincoln's Inn Fields, and was buried in old St. Pancras Churchyard in a remarkable tomb, designed by himself for his wife in 1816. His eldest son, John, who died in 1823, is also buried there.

The gift of Sir John Soane's house, with all its wonderful contents, with the object of "Promoting the study of Architecture and the Allied Arts," arrested even the attention of the public. So strangely, however, are we constituted that for ten who have any idea of Sir John Soane's life and aims, ninety will be found to have heard that he was an eccentric, who disinherited his sons and sealed up his papers in a cupboard, apparently for the needless confusion of his executors and trustees.



BANK OF ENGLAND. SECTION OF THE CONSOLS DIVIDEND OFFICE, ROTUNDA, AND FOUR PER CENT. OFFICE
(as designed), 1805.



SHOWING NEW BUILDING FOR ILLUMINATION EXPERIMENTS AT NATIONAL PHYSICAL LABORATORY, IN COURSE OF ERECTION

The Lighting of Public Buildings : Scientific Methods and Architectural Requirements

AN ACCOUNT OF EXPERIMENTAL WORK AND RESULTS BY E. H. RAYNER, Sc.D., J. W. T. WALSH, M.A., M.Sc., AND H. BUCKLEY, B.Sc., OF THE NATIONAL PHYSICAL LABORATORY (Summary of a Paper read at the Joint Discussion arranged by the Illuminating Engineering Society with the Royal Institute of British Architects on Tuesday, 28 March 1922)*

(I.) EXPERIMENTS ON LIGHTING INSTALLATIONS FOR LARGE CLERICAL OFFICES.

INTRODUCTION.

THE experiments described in this Paper arose out of a request of H.M. Office of Works for information which would assist them in drawing up a specification for lighting installations at the new building of the Ministry of Pensions at Acton. An initial average illumination over the whole room of about four foot-candles was aimed at.

EXPERIMENTAL ARRANGEMENTS.

For the purposes of the experiments one-half of one of the large rooms at Acton, the dimensions of which are 170 feet by 37 feet 6 inches by 12 feet 6 inches, was prepared and wired by H.M. Office of Works for the installation of various lighting systems. Several manufacturers kindly placed selections of their fittings at the

disposal of H.M.O.W. and the N.P.L., while H.M.O.W. carried out decoration schemes suggested by the N.P.L.

Some idea of the room used in this work can be obtained from Fig. 1, which shows it in plan and elevation. The structural details call for a certain amount of consideration, as they imposed important restrictions on the arrangement and choice of fittings. The dimensions were 80 feet by 37 feet 6 inches by 12 feet 6 inches, and the ceiling was crossed by a series of girders 15 inches deep, which divided the room into eight bays each 10 feet wide. In addition, each girder was sup-

* The Paper was divided into three parts dealing respectively with (a) Experiments on the artificial illumination of large offices by semi-indirect lighting; (b) Experiments on the natural lighting of picture galleries; and (c) A description of a building specially erected at the National Physical Laboratory for illumination experiments.

ported by a vertical stanchion 9 inches wide, at a distance of 15 feet 6 inches from one of the long walls. If due regard to symmetry were observed, the division of the ceiling in the manner indicated limited very much the freedom of arrangement of the various fittings, while the depth of the girders below the ceiling prevented the use of fittings actually on the ceiling, or even the placing of them at such heights as might have been desirable, if a clear expanse of ceiling had been available.

The windows (8 feet 6 inches by 5 feet), reaching to within about 15 inches of the ceiling, were at 10 feet centres in the middle of each bay. For the test they were covered with black boards representing the conditions existing when either no blinds at all or black blinds are used. White cloths were also provided to imitate the behaviour of light-coloured blinds. Experiments were made with and without these cloths, so as to evaluate the effect of blinds on the illumination.

The working plane was taken at a height of 2 feet 6 inches from the floor. In certain rooms at Acton the height is only 11 feet 6 inches. Information likely to be of value in selecting installations for these rooms was obtained by taking measurements at a height of 3 feet 6 inches. The justification for this lies in the fact that the portions of the walls and floor below the working plane exert little effect on its illumination. In the most favourable case possible with white walls and very light floor, this effect is believed to be less than 5 per cent., while in the cases under consideration the floor was fairly dark, having a reflection ratio of about 35 per cent.

EXPERIMENTAL PROCEDURE.

Illumination measurements with either a lumeter or luxometer were made along selected lines in the room, and the average illumination over the whole room was taken as the mean of all the observations (100 or more), the total watts used in each installation being also noted. In addition, observations of surface brightness of the visible light sources and the reflection ratios of the decorations were made.

The fittings are shown diagrammatically in Fig. 2, while typical polar curves are shown in Figs. 3 to 6. The arrangement of lighting points in two typical installations is shown in Figs. 7 and 8.

Four schemes of decoration were used as follows:—

DECORATION I.

Ceiling, distempered white; reflection ratio, 80 per cent.
Walls, distempered white; reflection ratio, 70 per cent.
Blinds, dirty white; reflection ratio, 55 per cent.

DECORATION II.

Ceiling, white; reflection ratio, 80 per cent.
Walls, buff; reflection ratio, 60 per cent.
Blinds, as before.

DECORATION III.

Ceiling, white; reflection ratio, 80 per cent.
Top frieze 2 feet 6 inches deep, white; reflection ratio, 80 per cent.
Walls, bluish grey; reflection ratio, 25 per cent.
Blinds, as before.

DECORATION IV.

Ceiling, white; reflection ratio, 80 per cent.
Top frieze 1 foot deep, white; reflection ratio, 80 per cent.
Walls (upper portion), buff; reflection ratio, 42 per cent.
Dado, bluish grey; reflection ratio, 25 per cent.
Blinds, as before.

The difference in illumination produced by the absence or presence of blinds is shown in the results of Installations I. and Ia., and again in Installations V. and Va.

The effect of a change of decoration on the same illumination system is exhibited by the following installations:—

From Decoration I. to II. by Installations VII. and VIII.

From Decoration II. to III. by Installations IX. and X., and also by VIII. and XI.

From Decoration III. to IV. by Installations XIII. and XIV., and also by XIIIa. and XIVa.

The effect of different heights of room (obtained by altering the height of the working plane) is shown in Installations XIII. and XIIIa., and also in XIV. and XIVa.

An indirect lighting system was employed in connection with Decorations I. and II., and the results are given under Installations XV. and XVI.

SUMMARY OF RESULTS.

The results obtained with the various installations are given in the form of curves of illumination along the lines of measurement (see Fig. 9). These are all reproduced in the original paper. The following table gives a general summary of the results:—

EFFICIENCY OF LAMPS 230V.		GAS-FILLED.
Watts.	Watts per Candle (aver.)	Lumens per Watt.
100	1.26	10.0
150	1.18	10.6
200	0.96	13.1

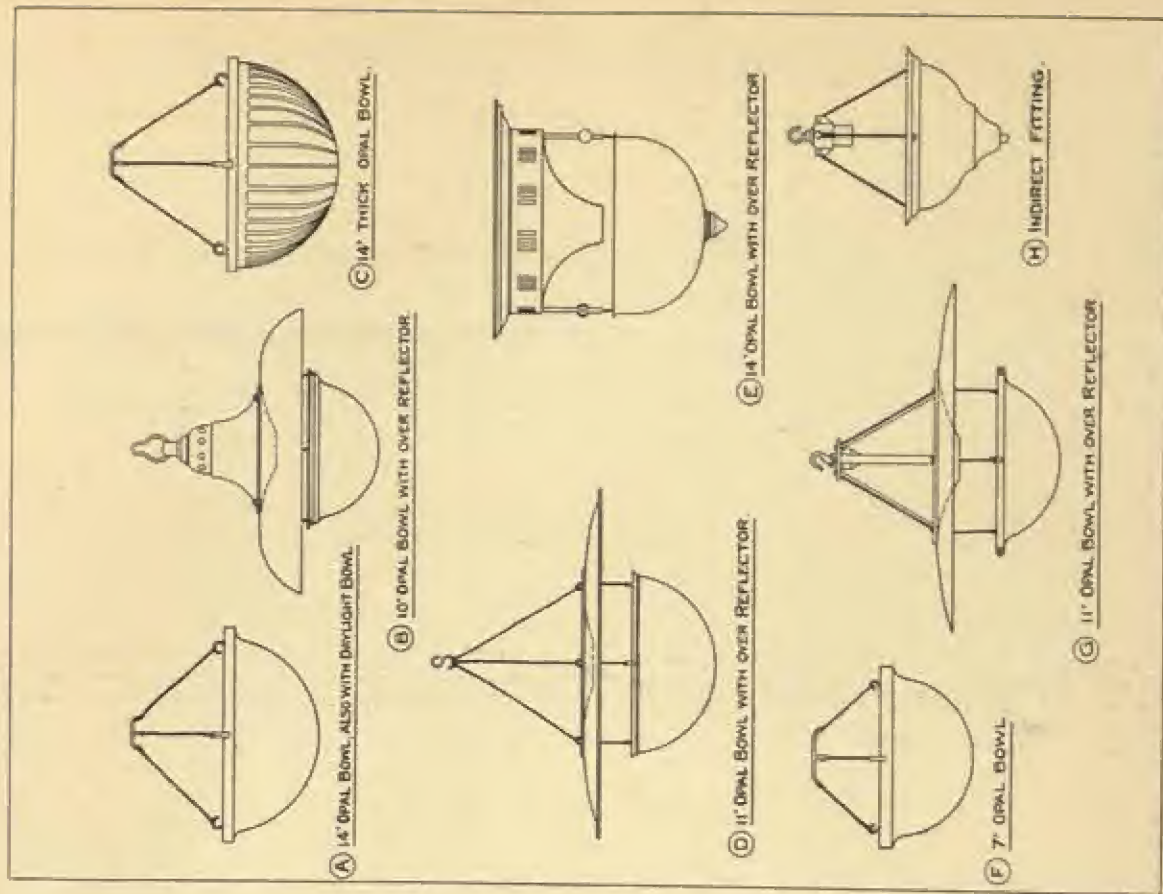


Fig. 2.—Diagrams of fittings used in experiments on lighting in the new building of H.M. Office of Works at Acton.

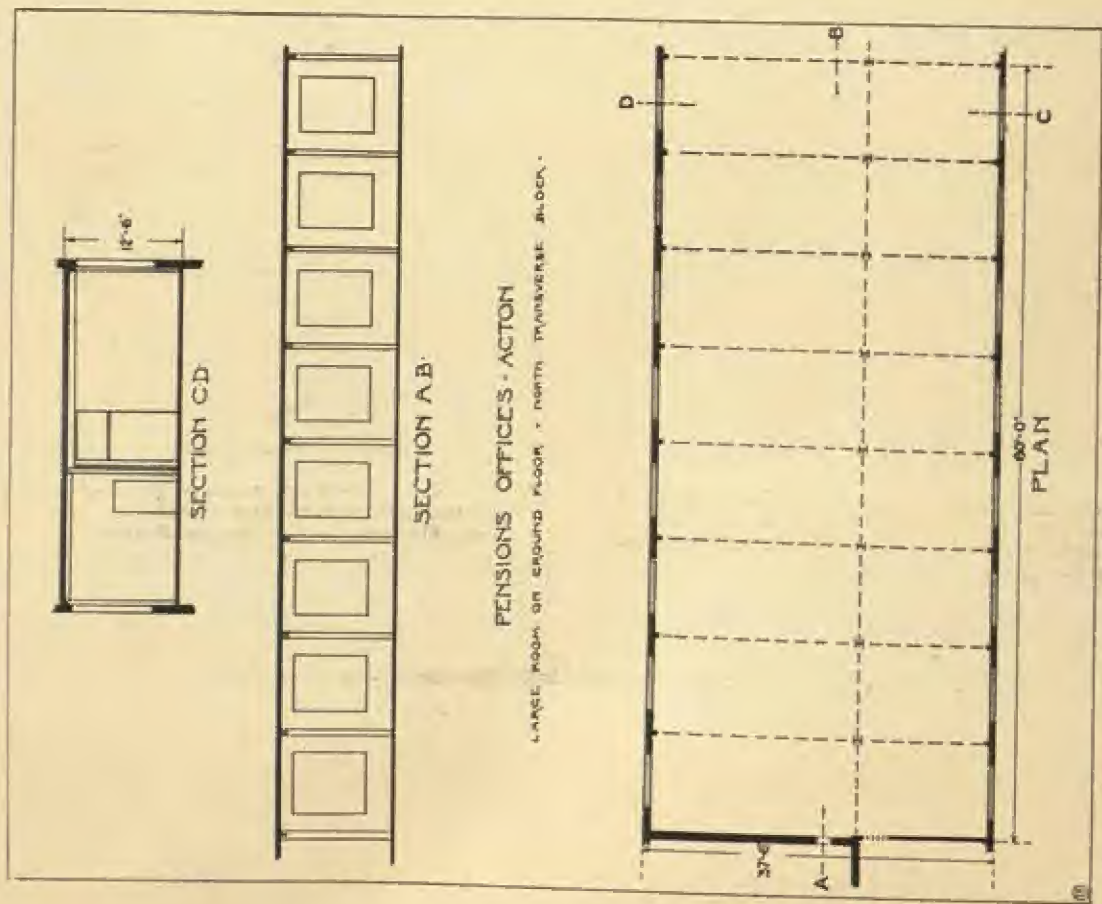


Fig. 1.—Showing dimensions of one of the large rooms in the new building of the Ministry of Pensions at Acton, where the experiments were conducted.

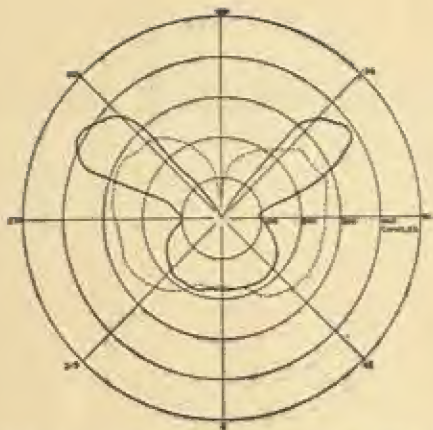


Fig. 3.—Polar curve of 230 v. 200 w. gas-filled lamp in conjunction with Semi-indirect 14 in. Opal Bowl and Over Reflector shown in Fig. 2E (lamp filament $2\frac{1}{2}$ in. below plane of top of bowl)

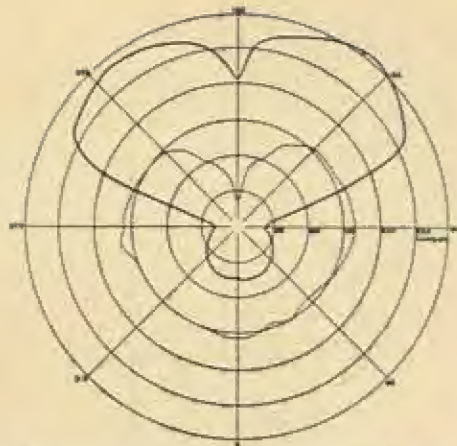


Fig. 4.—Polar curve of 230 v. 150 w. gas-filled lamp in conjunction with Semi-indirect 7 in. Opal Bowl shown in Fig. 2F (lamp filament 1 in. below plane of rim of bowl)

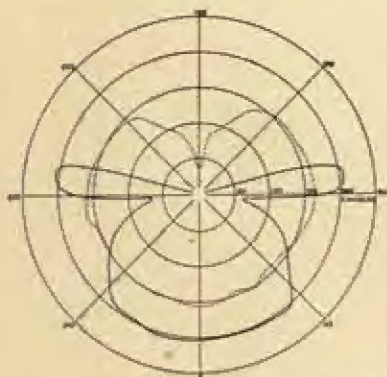


Fig. 5.—Polar curve of 230 v. 150 w. gas-filled lamp in conjunction with Semi-indirect 11 in. Opal Bowl and 23 in. Over Reflector shown in Fig. 2G (lamp filament in plane of rim of bowl)

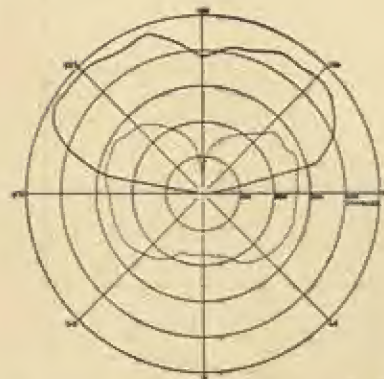


Fig. 6.—Polar curve of 230 v. 200 w. gas-filled lamp in conjunction with Indirect Silvered Reflector shown in Fig. 2H (lamp filament 1 in. below plane of rim of bowl)

TYPICAL POLAR CURVES SHOWING LIGHT DISTRIBUTION FROM FITTINGS

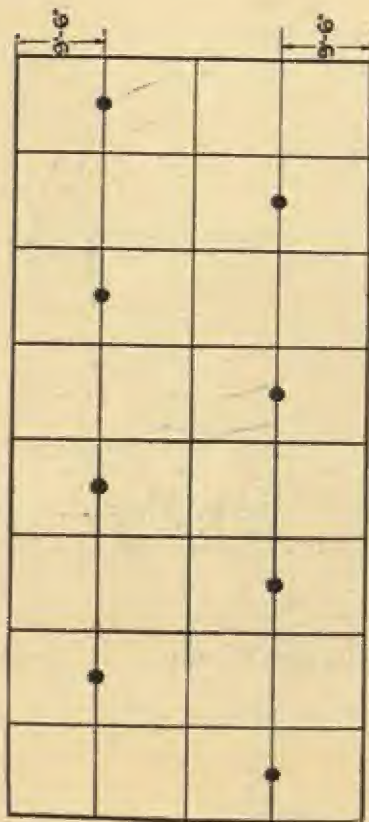


Fig. 7

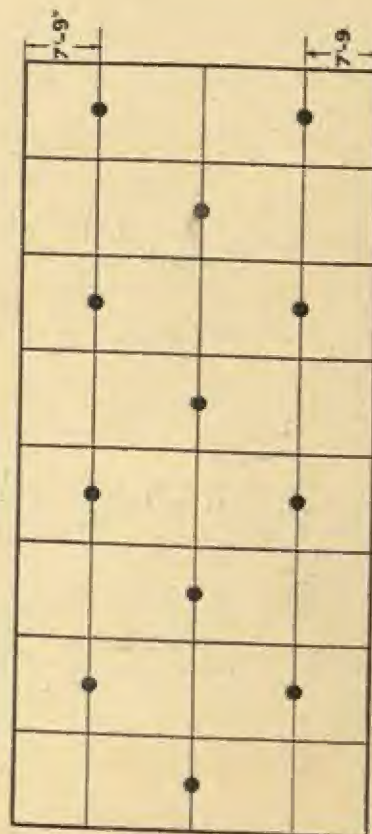


Fig. 8

Arrangement of Lighting Points in Two Typical Installations

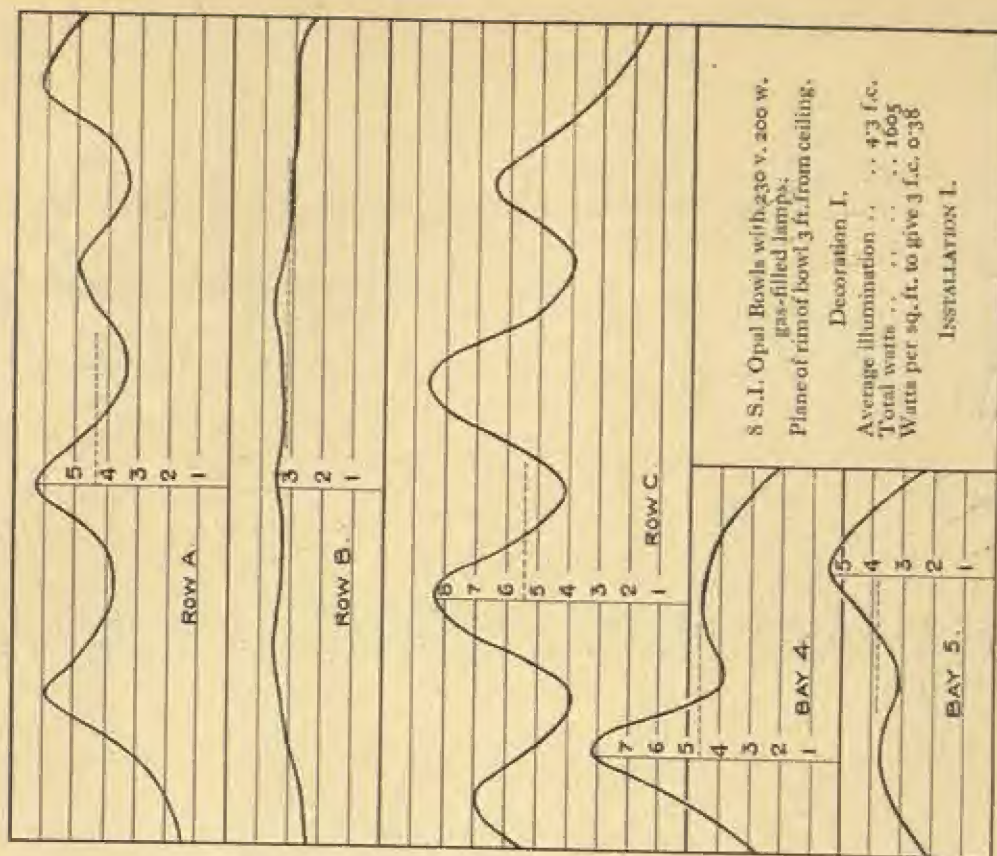


Fig. 9

Typical Curves Showing Distribution of Illumination

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In- stalla- tion.	Lamps.	Fit- ting (see Fig. 2)	Aver. Illum. f.c.	Watts. sq. ft. per 3 f.c.	Watts per sq. ft. per 3 f.c.	Utilisa- tion Co- efficient. Per cent.	De- corn.	Surface Bright- ness. Candles per sq. in.	Remarks.
I.	8-200W.	A	4.3	1,605	38	61	I.	1.0-2.0	Objectionable shadows on ceiling; high diversity factor.
Ia.	8-200W.	A	4.0	1,605	40	57	Ia.	1.0-2.0	Blinds removed; otherwise as I.
II.	12-150W.	A	4.1	1,900	46	62	I.	0.7-1.3	—
III.	12-150W.	A	3.8	1,945	51	55	I.	0.5-1.2	Bluish glass in bowls.
IV.	20-100W.	B	3.6	2,070	57	53	I.	1.0-1.2	Very uniform illumination.
V.	12-150W.	C	4.3	1,920	45	63	I.	0.8-1.3	—
Va.	12-150W.	C	4.0	1,920	48	59	Ia.	0.8-1.3	Blinds removed; otherwise as V.
VI.	12-150W.	D	3.9	1,925	49	58	I.	1.6-2.1	—
VII.	8-200W.	E	3.4	1,675	49	47	I.	1.5-2.5	Bowls uneven in density.
VIII.	8-200W.	E	3.5	1,650	47	49	II.	1.5-2.5	Change of decoration; otherwise as VII.
IX.	12-150W.	F	3.9	1,900	49	56	II.	2.5	—
X.	12-150W.	F	3.5	1,900	54	52	III.	2.5	—
XI.	8-200W.	E	3.1	1,670	54	43	III.	1.5-2.5	—
XII.	12-150W.	G	3.1	1,910	62	46	III.	0.6-1.2	—
XIII.	12-150W.	G	3.0	1,900	63	45	III.	0.6-1.2	Fittings probably give too extensive distribution.
XIIIa.	12-150W.	G	3.0	1,900	63	45	III.	0.6-1.2	Working plane raised 1 ft.
XIV.	12-150W.	G	2.9	1,900	65	43	IV.	0.6-1.2	—
XIVa.	12-150W.	G	3.0	1,900	63	45	IV.	0.6-1.2	Working plane raised 1 ft.
XV.	6-200W.	H	4.7	1,250	53	43	I.	—	Indirect lighting.
XVI.	6-200W.	H	4.7	1,250	53	43	II.	—	

CONCLUSIONS.

It is difficult to draw conclusions from a series of lighting installations unless it is known definitely what are the precise conditions under which the conclusions have to be applied. A number of installations have been put up in the experimental room and measurements of illumination have been correlated with the power consumption. In addition to the cost of power such considerations as the uniformity of the illumination, cost of maintenance of the decoration, cost of initial installation, etc., have to be taken into account.

With the kind of ceiling available at Acton, it was difficult to say immediately whether it would be better to utilise fittings in which an artificial ceiling, *i.e.*, an over reflector, was provided, or to make the best possible use of the existing ceiling. On comparing the fittings which use over-reflectors and those which do not, the tests indicate that the former are usually at a slight disadvantage. In this connection the values of the watts per square foot for 3 foot-candles illumination should be compared with the utilisation co-efficients of the various fittings.

The relatively high watts per square foot for 3 foot-candles illumination in the case of Installation IV. is probably due to the low efficiency of 230V. 150W. lamps. The fittings used in Installation VI. gave results comparing very well with other fittings using the same decoration. The surface brightness of its opal bowls was considerably higher than most of the others, so that this result is probably due in part to a higher transmission of the bowls.

The fittings used in Installations XII. to XIIIa. were used with darker decorations, but by applying the deduced reduction in average illumination in passing from Decoration II. to Decoration III. they still appear to require more watts per square foot for 3 foot-candles than the other fittings using over-reflectors. The opal bowls used in these fittings were rather dense, and were of lower intrinsic brightness than any others used.

The tests indicate that the effect of light-coloured blinds as compared with dark-coloured blinds—or what is practically the same thing, no blinds at all—is not unimportant when light-coloured decorations are used. The difference between the average illuminations was of the order of 7 per cent. With darker decorations, where considerations of upkeep have resulted in the decision not to pay too much attention to the reflection ratio of the walls, this effect is not so large.

As regards the rooms having a ceiling height of 11 feet 6 inches, the tests show that with the same decoration the difference is mainly one of uniformity, as would be expected. This difference can be partly eliminated by raising the fittings in the lower rooms, though the appearance of the ceiling may not be improved by such a change.

As a result of considering installation costs, and the cost of current, renewals and decorations over a period of five years, H.M. Office of Works were led to the adoption of the installation scheme described as Installation II. in conjunction with the following decoration scheme :—

Ceiling, white ; 80 per cent. reflection ratio.
Walls, light buff ; 60 per cent. reflection ratio.
Frieze, white, 12 inches deep ; 80 per cent. reflection ratio.

The rooms illuminated by this system were 170 feet long by 37 feet 6 inches wide ; this resulted in the use of 26 14-inch opal bowls using 150 watt lamps spaced alternately two and one in each bay. The average initial illumination was 4.15 foot-candles, while the maximum and minimum were 5.5 foot-candles and 2.9 foot candles respectively.

The results are exhibited in the form of curves in Fig. 9, which shows the illumination observed along three lines following the length of the room, two at the sides (A and C) and one in the middle (B). The lower curves are for cross lines in two of the bays.

(II.) A METHOD OF PICTURE GALLERY ILLUMINATION.

As a result of studying the subject of the illumination of picture galleries one can hardly fail to arrive at the conclusion that the important factors, which ought to

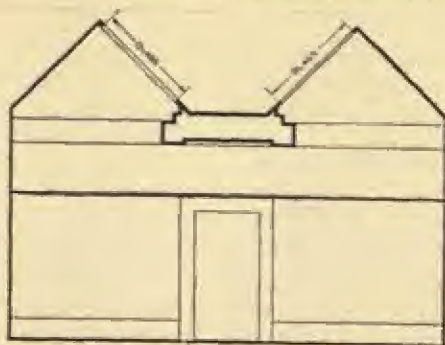


FIG 1 CROSS SECTION THROUGH MODEL
WITHOUT SCREEN.

receive the most earnest consideration from those responsible for their construction, have been very largely neglected. The consequence is, that many of the most noted galleries, erected at great cost and housing pictures of inestimable value, are most woefully deficient in the essential features of design which make for good lighting ; and, except under special circumstances, picture lovers can seldom hope to see many of the world's masterpieces as they ought to be seen.

The reason of this is that very often little or no consideration has been given to the effect of reflection of light from the surface of the glass covering the pictures. The glass is necessary for their preservation from dust and dirt, but, unfortunately, for the spectator, in many pictures the light reflected from the glass may be equal to or greater than that reflected from the darker parts of the picture. Clear glass reflects some

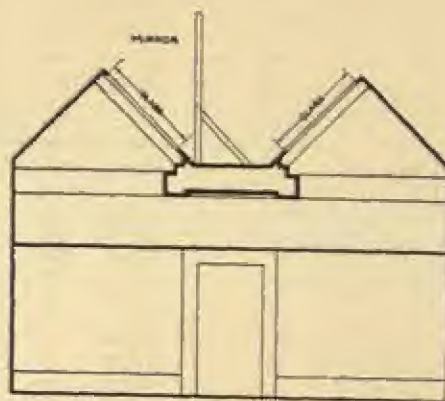


FIG 2 CROSS SECTION THROUGH EAST-WEST
MODEL WITH SCREEN

10 per cent. of the incident light ; and, though it may be possible to reduce this by a small amount, methods so far suggested would probably have disadvantages considerably out-weighing any benefits attainable. It is often impossible to study pictures properly, short of either removing the glass or of hanging a dark curtain behind the observer, as is commonly done when photographing them.

The importance of the 10 per cent. mentioned above will be realised from the fact that, while the reflection ratio of pictures of a light tone has been found to be as high as 50 per cent., that of Rembrandt's *Portrait of Himself*, for instance, is only 3.7 per cent., and of his *Portrait of a Jewish Merchant* only 1.5 per cent. It follows that the brightness of the image of a visitor's dress of a light colour (having a reflection ratio of, say, 80 per cent.) formed by reflection in the glazing which has a reflection ratio of 10 per cent., will be 8 per cent. Thus the reflected image of the dress may not infrequently be brighter than the painted surface. It follows that in a very large number of cases the light reaching the eye

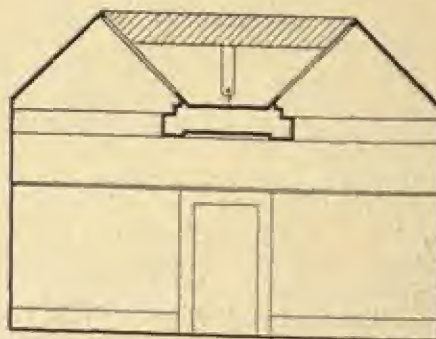


FIG 3 CROSS SECTION THROUGH NORTH-SOUTH MODEL
WITH SCREEN.

by reflection in the glass from light-coloured objects will be of the same order of magnitude as that from the picture itself. In addition, it should be noted that the images seen in the glazing are not in the plane of the picture, so that there is constant effort necessary on the part of the eye to keep the latter in focus.

Realising the unsatisfactory condition of affairs, Sir Frank Baines of the Office of Works, after giving very careful consideration to the subjects involved, referred to the National Physical Laboratory a design of a roof which should diminish to a very considerable extent the trouble due to reflections from the glazing. The main idea is to reduce as far as practicable the general lighting on the floor of the gallery, so that spectators will be illuminated as little as possible; and yet to provide adequate illumination on the walls.

The design is shown in Fig. 1, from which it is obvious that the result will be very different from that in many of the rooms at the National Gallery, which, while being quite suitable for pictures without protecting glass, allows so much light to fall on the floor and objects in the room as to cause inconvenience of the kind described.

It is, of course, impossible to prevent reflection from pictures on the opposite wall; and, short of using a dark curtain along the length of a gallery, the best way to minimise the effect is to keep the picture frames and the wall decorations, especially those above the picture line, low in tone, preferably somewhat lower than the average tone of the pictures. The experiments which have been made on these two points indicate the great value of the help resulting from the application of this principle of "monotony" in reducing the obtrusiveness of the inevitable reflections occurring in galleries hung with pictures on both sides. A design of the type illustrated in Fig. 1 obviously reduces very considerably the total amount of light entering the room, as compared with galleries of which the roof is nearly all glass. It was one of the chief aims of the investigation undertaken by the National Physical Laboratory to determine whether, with this reduction, sufficient illumination would be obtained on the pictures under the daylight conditions common in London.

The question of orientation was of first importance, and it was considered that the most likely use to which such a design might be put would be to a gallery running east and west.

GALLERY WITH LENGTH EAST AND WEST.

In a gallery with length east and west it is necessary to keep the sun off the north wall. The N.P.L. advised that the best way to prove any design qualitatively and quantitatively was to make preliminary experiments on a scale model, since illumination values would be independent of scale. They also suggested that direct sunlight should be kept off the north wall by a vertical

screen of sufficient height, which should be highly reflecting on the north side, and so make use of light from the north part of the sky for illuminating the pictures on the north wall, light from the same quarter naturally being incident on the south wall. (Fig. 2.) In this way, by adjusting the height and position of the screen, the illumination on the north and south walls might be made sufficiently equal, so that no material difference between them would be noticed whether the sun were shining or not.

A model was therefore built in the yard of the National Gallery to a one-third scale of a room 80 feet by 40 feet. Experiments were made in various kinds of weather on the height and position of the screen and on the decoration of the walls. The quantity measured was the daylight factor, which, for the purpose of these experiments, was defined as the ratio of the illumination on a small vertical part of the wall to the illumination on a horizontal area out of doors, shaded from direct sunlight. Similar illumination measurements were also made in a number of the rooms of the National Gallery.

The general results were that a design on the lines proposed with a screen of a height suitable for preventing sunlight reaching the north wall, it was possible to equalise the illumination on the north and south walls, to have the walls decorated in a suitable low tone, and yet provide adequate illumination on the pictures. The general illumination on the floor of the room was reduced to about a quarter of that in some of the existing galleries.

GALLERY WITH LENGTH NORTH AND SOUTH.

The application of the general design is somewhat simpler in the case of a gallery with length east and west than in the case of one with its length north and south. Without any screens a north and south gallery would have the sun on the west and east walls in the morning and afternoon respectively, and for the whole day on parts of the north wall. For the purpose of experiments on methods of overcoming these difficulties the model was turned through an angle of 90° and transverse screens were fixed between the roof ridges (Fig. 3). Various distances between the screens were tried, and they were hinged at the top so that the lower edges could be pulled towards the south. In this way a given area of screen is somewhat more economically used than when in the vertical position, and light from the north part of the sky is rather more used than that from the south part. The illumination towards the south end of the gallery is thereby also made practically equal to that of the north end. The general results are very similar to those obtained with the model when its length was east and west.

Circumstances have not yet permitted the construction of roofs on these lines to be undertaken.

(III.) SPECIAL BUILDING FOR
ILLUMINATION EXPERIMENTS.

There are so many different problems of importance, in which illumination is one of the governing factors in architectural design, that it has been decided that an Illumination Laboratory will be well worth its cost. The design of the daylight illumination of buildings for instance has been in the past inevitably based on rough and empirical rules, and, again, there are practically no data available for determining the change which should be made in a design found suitable for a building with a given orientation, in order to adapt it to a different orientation. The seasonal change of the daylight factor applicable in this country to different aspects has probably not been experimentally determined. Other architectural problems in connection with daylight illumination awaiting more detailed investigation are measurements of diversity factor, on which to found recognised limits, the correlation of window height with width, and also spacing with width of room, the proportions of lighting areas, the height and design of skylights, questions of lateral lighting, the effect of neighbouring buildings in diminishing the effective illumination, and the measurement of reflection ratio of building materials. Other problems arise from the study of corridor lighting and measurements, of the effects of obscuring, and prismatic glasses.

It is obvious that it is impossible to carry out much work of such a nature in ordinary buildings, which are required for use as offices or for other purposes. The effects of variation of dimensions or decoration under both natural and artificial lighting conditions cannot be properly studied in such circumstances.

Realising that improvements in knowledge on which design is founded may be expected to result in considerable and occasionally in great economy, as it is of the greatest importance, for instance, that valuable building sites should be developed to their utmost capacity, the Treasury have sanctioned expenditure on the construction of a building for carrying out illumination experiments. It is expected that in most cases, especially for daylight measurements, scale models will suffice, so that the most convenient absolute size can be chosen. The building itself is merely a glass roof structure 60 feet by 30 feet by 17 feet to the gutters, supported on 10-inch by 7-inch stanchions. It is intended to build up the experimental models out of wood and canvas underneath it. In order to avoid expenditure which was not absolutely necessary, the work will be begun without filling in the vertical sides of the building with glass. Whether the disadvantage of not being entirely wind and weather proof will be very serious remains to be seen, and eventually it may be found desirable to enclose it completely. The ground is of concrete with a slight slope to the sides. Into it battens are dove-tailed at 4 feet centres in both directions, to which the models can be screwed down. Provision for the supply of electric power is also being made.

The building will be large enough to permit of several models being tested together. The use of turn tables will enable direct and definite figures to be obtained on such subjects as the relation of daylight and other factors to compass direction.

The building will be available for the experiments carried out on behalf of the general public, and it is hoped that it will prove not the least useful part of the plant of the Photometric Department of the Laboratory.

Reviews

THE LEGACY OF GREECE. Edited by R. W. Livingstone. The Clarendon Press. 424 pp. 7s. 6d.

This book, which for the first time gives a succinct account of the achievements of the Greeks in politics, science, literature, and the arts, is a valuable help to the understanding of the sources of European culture, and there is no section of the community to whom it should make a surer appeal than to members of our profession, as architecture is the very field of activity in which the continued influence and authority of the Greeks is most apparent.

Eleven distinguished writers each contribute one chapter upon a special aspect of Greek civilisation, and the result is a volume far more authoritative than could possibly have been produced if a single author had tried to embrace the whole theme himself. Professor Gilbert Murray has an introductory chapter on "The Value of Greece to the Future of the World," and the Dean of St. Paul's contributes an essay on the religion of the Greeks, which is marked by his usual vigorous

style. Professor Burnet writes on philosophy, Mr. R. W. Livingstone on literature, and Mr. Arnold Toynbee on history, while Mr. Alfred Zimmern gives a penetrating study of the political thought of the fifth century B.C. But perhaps the chapters which are most likely to be received by the average reader as a new revelation will be those dealing with the scientific achievements of the Greeks. While Euclid and Pythagoras are, of course, household words, few people realise the progress which had been made in astronomy, physics, biology, and medicine. Sir T. L. Heath, Professor D'Arcy W. Thompson, and Mr. Charles Singer enable us to judge the extent of such progress and give information which must cause even the already convinced Hellenist to increase his reverence for the intellectual genius of this people. Professor Percy Gardner writes on "The Lamps of Greek Art," and the concluding chapter on architecture is contributed, as is fitting, by Sir Reginald Blomfield. "The Greeks of the age of

Pericles," he says, "wanted neither revivalism nor revolution; they moved forward, without haste or anxiety, on traditional lines, and they were able to do so because their art was so interwoven with their life that, in the plastic arts, they could no more have changed their methods of expression than they could have changed their manner of speech. That high outlook is lost, and hardly to be recovered under modern conditions of social life and political government. . . . Yet the Greek ideal remains. In our fitful fever of honest intention and wrong judgment, high endeavour and point-blank commercialism, Greek art, the art of Pheidias and Ictinus, is still the wise mother to whom we must return."

This excellently produced book has wisely been issued at a popular price.

A. TRYSTAN EDWARDS [A.].

HOUSING BY EMPLOYERS IN THE UNITED STATES. By Leifur Magnusson. *Bulletin of the United States Bureau of Labour Statistics*, No. 263. 80., Washington, 1920.

This book is one of the many Bulletins of the United States Bureau of Labour Statistics, being No. 263 of the series. It purports to be a study of the best and most representative work carried out by employers in the housing of their workpeople. To the student of statistics it may be of interest, since there are some 130 statistical tables; to the architect, and particularly those interested in housing, it leaves much to be desired.

One is perhaps prone to regard everything American as the last word, but a study of this book leaves no doubt but that America could learn much both from this and European countries in the way the housing of the workers should be conducted; American architects, it would seem, have not been called in to advise employers; in fact, it is clearly stated that the possibilities of architecture and town planning have been neglected. Evidence of this is apparent in reading the book, the word architect is not even mentioned.

The investigation embraces mainly the cotton mill towns of New England and the Southern States, and the coal, iron and copper mining districts and steel towns scattered over the whole of the States—from North to South and East to West, an area of some thousands of miles, surely an investigation of unusual magnitude, and undoubtedly conducted with care and attention.

Town planning in the greater number of cases does not exist, it is usually village planning, and as such is just left to turn out, with resulting disaster; but where large interests are concerned and regular community towns developed, then town planning does come in—usually of the ordinary rectangular type as being the most economical, though where sites are hilly and difficult, the contours have perforce to be engineered, resulting in less formal and more interesting lay-outs. On

paper many of these irregular lay-outs look right, but they do not appear to have been well carried out.

Streets are wide, badly paved, if at all, and lacking provision for parking, trees and the like; alleys, fifteen to twenty feet wide, are the rule at the backs of the houses for sewage and refuse collection; in one town it is suggested that the main streets shall be grass, with side walks, and the traffic confined to the alleys—its success would seem rather problematical.

There is a good deal of race segregation, the negroes in many cases faring for themselves both as to housing and housekeeping, and the same may be said of much of the imported European labour, the employers in the main providing for the skilled workers.

Of the types of houses provided, 48 per cent. are detached dwellings, 35 per cent. semi-detached, and 11 per cent. "row" dwellings, the remainder being of varying types, with, in some cases, two-storey flats; the accommodation is generally four, five or six rooms in each dwelling.

The houses as a whole are very badly planned, and their design very little better: boxlike structures with lids, and the rooms all leading out of one another; the sanitation, when existing in any form, is most primitive, 61 per cent. of the houses have no conveniences inside, and no water, sometimes a hole in the ground or a privy at the back of the plot suffices, and sometimes there is a sink inside which is used for washing up, bathing and laundry purposes—rarely is there any drainage system.

Exception must, however, be taken in the case of the housing for the employers in miscellaneous industries, this is generally of a higher standard in all respects, due to the fact that it is situated nearer to towns, and is of more recent date.

In the more isolated districts the employer is first obliged to take up housing in order to stabilise his labour for the factories; he does not, in the majority of cases, take it up as a business proposition, as the low profit returns prove; but he does come perforce to take a lively interest in it, the public utilities are owned by him—in fact, it would seem he owns the whole community, providing markets, church and schools, and paying parson and teacher, and otherwise providing for the entire welfare of the worker—one only regrets that he does not also call to his aid the architect's skill, it would be greatly to the advantage of all concerned.

There is a vast amount of information in the book, but not, however, as one might have thought from the title, fraught with any great interest to the architect. The statistics are too dry as dust for him, and while the plans of the lay-out and of some of the houses are well reproduced, the photographs of the dwellings are indifferent, and in many cases distorted. A general absence of a scale on the drawings is also to be regretted.

HENRY V. ASHLEY [F.].



MR. ARNOLD MITCHELL'S DISCOVERY
IN DORSETSHIRE.

This statue, which is now in the Ashmolean Museum at Oxford, was discovered by Mr. Arnold Mitchell [F.] in a backyard in a Dorsetshire village, cloaked with dirt and surrounded by rubbish. Mr. Mitchell presumes that the figure originally belonged to a wealthy collector who travelled over the world in search of art treasures, and whose large house was filled with his "finds" and purchases. When the man died, the statue, which probably formed part of his collection, was overlooked, and purchased with a collection of oddments after the sale by the man from whom Mr. Mitchell bought it. In spite of its

condition, Mr. Mitchell appreciated the beauty of the figure, and was much more greatly impressed after it had undergone a process of cleaning. The figure was almost complete. As seen in the illustration, there are small reparations to the knee, to the nose, and to the chin. It was brought to the attention of Dr. Percy Gardner, Professor of Classical Archaeology at Oxford, who attributes it to the great period of Greek sculpture, dating about a hundred years later than the Elgin marbles. The subject is customary in Greek sculpture—a Mourning Woman.

Correspondence

REGISTER FOR CRAFTSMEN.

To the Editor, JOURNAL R.I.B.A.,—

DEAR SIR,—I have read with great interest Mr. Bulkeley Creswell's letter in your last issue, in which he suggests that a register of genuine craftsmen be kept at the Institute for the benefit of those members who disapprove of employing commercial firms.

There is a growing feeling against this practice, which, as Mr. Creswell points out, only helps to support the attempt large firms are making to take our work from us. Many of us have great difficulty in finding small painstaking establishments capable of doing the best class of workmanship. We know that such establishments exist, and that these, as they do not advertise or occupy prominent sites, are able to give real value at less cost.

Mr. Creswell's proposal is practical and should receive the support of all those who value the services of genuine craftsmen as a necessary element in their work.—I am, yours faithfully,

W. W. SCOTT-MONCRIEFF [F.].

STONE PRESERVATION.

Heriot-Watt College, Edinburgh.

To the Editor, JOURNAL R.I.B.A.,—

SIR,—May I throw out a suggestion, which I believe is new, as to a method for preserving decaying sandstones from further decay?

Certain compounds of alcohol-radicles with silica, when exposed to moist air hydrolyse, deposit hydrated silica in a coherent form, and thus act as a cement. The ether can be thinned with alcohol, and is a very stable body as long as it is not exposed to moisture, and if a piece of rotten sandstone is treated with it in the course of a few days the sandstone hardens up and the resulting cement resists the attacks of acids.

Unfortunately, this process does not solve equally well the important problem of preserving limestone, since, though it binds the particles of limestones together, it does not protect the particles themselves from attack.—I am, yours faithfully,

A. P. LAURIE.

Obituary

H.R.H. THE MAHARAJA OF JAIPUR, G.C.S.I., G.C.I.E.
etc. [*Hon. Fellow*].

By the recent death of His Highness Maharajadhiraj Sawai Sir Madho Singh Bahadur of Jaipur, the head of the Kachhawa Rajputs, the Royal Institute loses one of its oldest Honorary Fellows. He was elected to the Honorary Fellowship in 1891, and at the time of his death his only senior in the rank was the Duke of Connaught, who was elected in 1879.

The history of the late Maharaja's life throws an interesting light on dynastic succession in the rule of the Indian princes.

Born on 28 August 1862, and given the name of Kaim Singh, he was the second son of the Thakur of Isarda, a petty chieftain related to the ruling house of Jaipur. Kaim Singh was in his teens when his father died. Owing to disputes relating to the succession, his elder brother, after bringing about his imprisonment, drove him into exile. He lived in poverty, and ultimately obtained employment as risaldar of a troop of horse of the Nawab of Tonk. Two events of this period greatly influenced his future. One was his meeting at Brindaban, in the United Provinces, with the well-known *guru*, Baba Brahmachari, whose disciple he became; and the other an opportunity for laying his case before the Maharaja of Jaipur, Ram Singh. When the reign of that Prince was closed by his death, in September 1889, he had no heir. Colonel T. H. Hendley, the Medical Officer of the British Agency, and then acting Resident, asked him on his deathbed if he wished to adopt a successor, in accordance with Hindu usage. He replied that he could rely on the British Government to do what was fitting to fill the *gadi*. This expression of confidence is known to have been much appreciated by Queen Victoria. Subsequently, when further encouraged, he named Kaim Singh, and the nomination was confirmed by the Viceroy.

By this wholly unexpected turn in his affairs, the young soldier, who was still only 18, was given control of one of the most prosperous and important of Indian States, comprising an area of nearly sixteen thousand square miles and a population of some 2,658,000. He brought to the *gadi* high religious principles, benevolence and shrewd judgment. He showed himself readily accessible to modern ideas, especially in education and sanitation. Jaipur possesses excellent hospitals, schools and colleges and a beautiful museum, the gift of the Maharaja. His Highness's interest in education was recognised by the hon. LL.D. of Edinburgh University.

He was selected to represent the Rajputana chiefs at King Edward's Coronation, when he paid his only visit to this country.

The history of the architecture of India is indebted to the late Maharaja for causing to be published in 1890 the *Jaipur Portfolio of Architectural Details*, compiled chiefly from old buildings in Rajputana. His predecessor founded the School of Art in Jaipur, and all the drawings were made for the Portfolio by native students from this school. The work was the first of the kind, the first instance of the head of a protected state offering to the supreme Government a technical book on architecture, which was published at his own cost, and prepared under the supervision of the late Colonel S. S. Jacob, C.I.E. The Portfolio was published in six parts, and contains 374 plates. The Maharaja presented a copy to the Institute Library in 1891.

Apart from his interest in native art and education, the late Prince was a loyal adherent to the Paramount Power; which was expressed on many occasions, both in generous services and by example.

THE RESTORATION OF RHEIMS CATHEDRAL BRITISH EMPIRE FUND

Sir Aston Webb, P.R.A., will preside at the lecture to be given in the Gallery of the Institute on Thursday, 16th November, at 8.30 p.m., by Sir Isambard Owen, on the Cathedral of Rheims, illustrated by lantern slides.

The Gallery is being lent for the occasion, and a collection will be made on behalf of the British Empire Fund towards the restoration of the Cathedral.

The Society for the Protection of Ancient Buildings is giving its help in organising the appeal, as it approves the lines on which the repairs will be carried out by the French Government, which has offered to place a tablet in that portion of the church reconstructed by the offerings of our people as a memorial to our soldiers and a tribute of affection for France. The patron of the fund is H.M. Queen Alexandra, the President is the Duke of Portland, the Chairman the Lord Mayor of London, and amongst the Vice-Presidents are the French Ambassador in London and the British Ambassador in Paris.

VENTILATION AND ATMOSPHERE OF FACTORIES

Professor Leonard Hill, M.D., F.R.S., will give one of the Chadwick Public Lectures in the large gallery of the Institute, on "Ventilation and Atmosphere in Factories and Workshops," on Thursday, 26 October, at 8 p.m. Sir William Collins, K.C.V.O., M.D., will preside. Admission will be free.

PRESIDENT OF THE SOCIETY OF ARCHITECTS

Mr. John Partridge, F.S.Arc., F.S.I., of Bank Chambers, Richmond, has been elected President of the Society of Architects in succession to Mr. E. J. Sadgrove [F.].

Sessional Meetings,

1922-23

MONDAYS—AT 8 P.M., EXCEPT WHERE OTHERWISE STATED.
1922.

Nov. 6.—INAUGURAL MEETING: PRESIDENT'S ADDRESS, at 8.30 p.m.

Nov. 20.—General Meeting: ILLUMINATING ENGINEERING IN RELATION TO ARCHITECTURE. By Lawrence M. Tye.

Dec. 4.—Business Meeting: Election of Members.

Dec. 18.—General Meeting: THE LAW OF BUILDING OUTSIDE LONDON. By A. N. C. Shelley, M.A.Oxon., B.C.L., of H.M. Ministry of Health.

1923.

Jan. 8.—Business Meeting: Election of Members.

Jan. 22.—General Meeting: THE LONDON COUNTY HALL. By Ralph Knott [F.], and W. E. Riley, R.B.A. [F.].

AWARD OF PRIZES AND STUDENTSHIPS.

Feb. 5.—PRESIDENT'S ADDRESS TO STUDENTS, at 8.30. PRESENTATION OF PRIZES.

Feb. 19.—General Meeting: ARCHITECTURE AND ARCHITECTS IN INDIA. By H. V. Lancaster [F.].

Mar. 5.—Special and Business Meetings: Election of Royal Gold Medallist; Election of Members.

Mar. 19.—General Meeting: THE HAMMERSMITH HOUSING SCHEME. By G. E. S. Streatfeild, O.B.E., D.S.O. [F.].

Apr. 9.—General Meeting: THE ARCHITECTURE OF PROVINCIAL FRANCE. By Henry M. Fletcher, M.A.Cantab. [F.].

Apr. 23.—General Meeting: THE LITERATURE OF ARCHITECTURE. By William G. Newton, M.C., M.A.Oxon. [A.].

May 7.—ANNUAL GENERAL MEETING.

May 28.—General Meeting: TRADITION AND ORIGINALITY IN ITALIAN RENAISSANCE ARCHITECTURE. By Geoffrey Scott.

June 11.—Business Meeting: Election of Council and Standing Committees; Election of Members.

June 25.—PRESENTATION OF THE ROYAL GOLD MEDAL, at 8.30.

EXHIBITION OF BRITISH ARCHITECTURE

It has been found necessary to postpone until further notice the Exhibition of British Architecture, which was to have been opened on 1 November, in the Galleries of the Royal Institute.

IAN MACALISTER,
Secretary R.I.B.A.

ARCHITECTS' FEES FOR ABANDONED HOUSING WORK

The Council of the Institute have appointed Messrs. H. T. Buckland, Francis Jones and Herbert A. Welch to form a tribunal, whose duty it will be to examine all applications received by the R.I.B.A. from Housing Architects under the provisions of Clause E (4) of G.H.M. 61, and to act generally on behalf of the R.I.B.A. upon this matter. It will be remembered that these three gentlemen represented the R.I.B.A. during the negotiations which resulted in the issue of G.H.M. 61, and it is regarded as fortunate that they are able again to serve the R.I.B.A. and the profession.

It has been decided to charge a nominal fee of two guineas to all architects who desire the support of the R.I.B.A. The funds thus obtained will be devoted entirely to the expenses in connection with the Tribunal. All housing architects from whom applications have been received to date have been notified of this; and those who wish for support but have not yet applied should do so without delay, as a speedy settlement of all accounts is now anticipated.

BOARD OF ARCHITECTURAL EDUCATION R.I.B.A. SPECIAL WAR EXAMINATION

The Special War Examination will be held, *for the last time*, from 11 to 15 December 1922. Testimonies of study, forms of application, etc., should be submitted by 4 November next.

Examination centres will be announced in due course.

Relegated candidates will be required to take the ordinary examinations of the Royal Institute if they desire to qualify for the Associateship.

EVERARD J. HAYNES,
Secretary, Board of Architectural Education.

R.I.B.A. ARCHIBALD DAWNAY SCHOLARSHIPS

Owing to Mr. C. S. White, of the Architectural Association School of Architecture, being unable to take up his R.I.B.A. Archibald Dawnay Scholarship, a fresh Award has been made in favour of Mr. C. H. Hutton, of the Liverpool University School of Architecture.

The Scholarship, which is £25 per year for two years in value, is intended to foster the study of advanced construction.

EVERARD J. HAYNES,
Secretary, Board of Architectural Education

R.I.B.A. EXAMINATIONS: PAST QUESTIONS

The Questions set at the Intermediate and Final (and Special) Examinations have just been published in pamphlet form, and may be obtained at the Royal Institute, price 1s. 6d. (exclusive of postage).

Candidates will find the study of past questions a great help in preparing for the examinations.

EVERARD J. HAYNES,
Secretary, Board of Architectural Education.

Competitions

OLD CRANLEIGHAN SOCIETY CRICKET PAVILION COMPETITION.

Members and Licentiates of the Royal Institute of British Architects must not take part in the above competition, because the conditions are not in accordance with the published Regulations of the Royal Institute for Architectural Competitions.

IAN MACALISTER, *Secretary.*

COMPETITIVE DESIGNS FOR MONUMENT TO AUSTRALIAN AND NEW ZEALAND SOLDIERS TO BE ERECTED AT PORT SAID, EGYPT.

Designs for a monument to be erected at Port Said, Egypt, to the memory of soldiers of the Australian and New Zealand Forces who fell in Egypt, Palestine, and Syria during the years 1916, 1917 and 1918, are invited by the Australian Department of Defence, acting for the Commonwealth Government and the representatives of the Forces named. Designs must be the work of sculptors and architects of British nationality permanently resident in Australia or New Zealand, and Australian and New Zealand sculptors and architects residing in other countries. A statue or group of statuary in marble or bronze, with granite for the pedestal, or an approved hardstone, will form the main feature of the monument. The design must embrace in its composition sculpture typifying both Australian and New Zealand horsemen. Its character otherwise will be left to the designer. Each design or model must be accompanied by a sealed opaque envelope containing the name and address of the author together with a declaration that the design or model is the personal work of the competitor, or joint competitors, and that the drawings or models have been prepared under his or their own supervision. The cost of the monument is to be limited to £11,000, of which £7,500 is to be allocated to sculpture and £3,500 is to be allocated to the pedestal, base, and steps. Designs must be delivered, free of all charges, to the Secretary, Department of Defence, Melbourne, Victoria, on or before 12 noon, on Saturday, 31 March 1923. Premiums of 250 guineas, 100 guineas, and fifty guineas, respectively, will be paid for the designs placed first, second and third in order of merit by the assessors appointed by the Department of Defence, Major-General Sir J. Talbot Hobbs (architect), G. V. F. Mann, Esq., Director of the National Art Gallery, Sydney, and G. Sydney Jones, Esq., A.R.I.B.A. (architect). The award of the assessors will be binding on all concerned. The design placed first will become the property of the Commonwealth Government. Further particulars, including the conditions of the competition in full, a plan and photographs of the site of the proposed monument, and a sketch of its surroundings, may be had on application at the office of the High Commissioner for Australia, Australia House, Strand, W.C.

In the Report of the International Conference of Architects at Brussels, published in the last number of the JOURNAL, it was stated that an official representative from Russia was present. Mr. Cuypers writes that Mr. Böker, formerly of Petrograd, and now living at Wiesbaden, spoke only as representing his friends in Russia, but that Russia was not officially represented. Mr. Böker will be remembered by many English friends as the representative of Russia at previous conferences.

Notices

The following applications for Election have been received. Notice of any objection or other communication respecting the Candidates must be sent to the Secretary for submission to the Council prior to Monday, 6th November, 1922.

AS FELLOWS (15).

- ANSELL: WILLIAM HENRY, M.C. [A. 1900], 1 Gray's Inn Square, W.C.1; 60 Holland Park, W.11.
BOTHWELL: EDWIN FORBES [A. 1915], Union Building, The Bund, Shanghai, China.
CALLOW: CHARLES FRY [A. 1905], 47 Havelock Road, Hastings; Devonshire Road, Bexhill; 74 London Road, St. Leonards-on-Sea.
CARNELL: JOHN LAURIE [A. 1895], St. Clair, Gaywood Road, King's Lynn.
COLLINS: HENRY RICHARD [A. 1921], Edgar House, City Walls, Chester.
DITCHBURN: DAVID WILLIAM [A. 1908], Standard Building, Hornby Road, Bombay, India.
GOTCH: LAURENCE MURSELL [A. 1906], Bank Chambers, Kettering; 23 Station Road, Kettering.
MARWICK: THOMAS PURVES, F.S.I., F.S.A.(Scot.) [A. 1883], 43 York Place, Edinburgh.
MIDDLETON: ORLANDO [A. 1895], 55 Lattimore Road, St. Albans; Chequers Hill, Flamstead, near Dunstable.
RILEY: WILLIAM HENRY [A. 1906], 25 Horsefair Street Leicester; Whitehorne, Evington Lane, Leicester.
RYDE: FRANK CECIL [A. 1888], 12 Little College Street, Westminster, S.W.1; "Five Trees," Otlands Chase, Weybridge, Surrey.
SHORT: Major ERNEST WILLIAM GEORGE, C.B.E., F.S.I., S.R.E.S. [A. 1921], Royal Engineers Office, Bulford Camp, Salisbury Plain; The Mount, East Harnham, Salisbury.
SOUTAR: CHARLES GEDDES [A. 1921], 15 South Tay Street, Dundee; Easterbank, Barnhill, Dundee.
STRETTON: CLEMENT [A. 1921], Alliance Chambers, Horsefair Street, Leicester; "The Brackley," Knighton Road, Leicester.
TANNER: EDWIN JOHN [A. 1914], Carlton Chambers, 12 Regent Street, S.W.1; 12 Hampstead Way, N.W.11.

AS ASSOCIATES (141).

- ALEXANDER: WALTER [S. 1922—Special War Exemption], 72 Mafeking Road, Quetta, India.
ALLEN: CHARLES WILLIAM [Special War Examination], c/o Arthur W. Brewill, Esq., 1 Low Pavement, Nottingham; 116 Mansfield Road, Nottingham.
ANGUS: ANDREW EDWARD [Special War Examination], 116 London Street, W., Windsor, Ont., Canada.
AUSTIN: LESLIE MAGNUS, A.R.C.A. [Special War Examination], Royal College of Art, South Kensington, S.W.; 7 Rowan Road, Hammersmith, S.W.
BACKWAY: GERALD HENRY [Special War Examination], 7 New Square, Lincoln's Inn, W.C.2; 22 Birdhurst Road, Wandsworth, S.W.18.
BAILLIE: WILLIAM [Special Examination], 78 Park Drive South, Whiteinch, Glasgow.
BALL: WALTER FREDERICK [Special War Examination], 53 Howard Street, Gloucester.
BALL: WILLIAM ARTHUR CRESSFORD [Special Examination], 73 St. James's Road, Croydon.
BANKART: HUGH CHARLES [Special War Examination], c/o Sir Edwin L. Lutyens, R.A., 7 Appletree Yard, York Street, St. James's Square, S.W.1; 25 Parkhill Road, Hampstead, N.W.3.

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- BATHURST : LESLIE JOHN [Special War Examination], 50 Woodside Road, Wood Green, N.22.
- BEAUFAY : SAMUEL LESLIE GEORGE [Special War Examination], 163 Tufnell Park Road, Holloway, N.7.
- BRETON : CHARLES NICHOLSON [Special War Examination], 200B Adelaide Road, N.W.4.
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- BINGE : JOSEPH WALLACE, M.C. [Special War Examination], The Oulands, Acacia Grove, New Malden, Surrey.
- BIRD : ERIC LESLIE [Special War Examination], Austenwood Lane, Chalfont St. Peter, Bucks.
- BLAKELEY : TOM [Special War Examination], Town Hall, Dewsbury : 28 Orchard Street, Savile Town, Dewsbury.
- BOOKER : ALFRED VINCENT [Special War Examination], 8 Old Jewty, E.C.1 ; 3 Montem Road, Forest Hill, S.E.23.
- BOX : HARRY EWART [Special War Examination], 54 Holland Road, Maidstone.
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- BROTHERS : COLIN STANLEY [Special War Examination], 49 Whitechapel, Liverpool.
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- BUTLER : BERTRAM [Final Examination], 31 Priory Street, Dudley.
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- CLARK : SIDNEY [S. 1911—Special War Exemption], 10 Guilford Place, Bloomsbury, W.C.1.
- CORNES : ERNEST HAROLD [Special War Examination], "Meadowside," Cambrian View, Chester.
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- EGGINS : FRANK WALLIS [Special War Examination], 5 Church Street, Paignton, South Devon.
- ELIAS : JACK [Special War Examination], The Old Rectory, Cublington, Bucks.
- FARR : ARTHUR CECIL [Special War Examination], 18 New Bond Street, Bath.
- FARRIER : ARCHIBALD VICTOR [Special War Examination], 101 The Ridgeway, Wimbledon, S.W.19.
- FLITCROFT : ALFRED CRUMBLEHULME [Special War Examination], 172 High Street, Bolton, Lancs.
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- FRASER : BRIGHT [Special War Examination], 5 Vaughan Road, Wallasey, Cheshire.
- FRYER : EDGAR [Special War Examination], 46 Carter Street, Princes Road, Liverpool.
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- GEORGE : CONRAD ERIC [Special War Examination], 22 Caroline Street, Eton Terrace, S.W.1.
- GELDER : FRAMBOZ NOWBORN [Final Examination], Indian Students' Hostel, Keppel Street, W.C.1.
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- SHEPHERD : JOHN CHIENG [Special War Examination], Gleg-hornie, Freshfield, near Liverpool.
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- SKIPWITH : LIONEL ERNEST [Special War Examination], 34 Bedford Square, W.C.1.
- SLAUGHTER : LESLIE SCOTT [Special War Examination], 50 West End Lane, West Hampstead, N.W.
- STARLING : WILLIAM LOVE [Special War Examination], "Orby Cottage," Quickley Lane, Chorley Wood, Herts.
- STILLMAN : CECIL GEORGE [Special War Examination], 43 Fair-field Road, Winchester.
- STRIBLING : HERBERT JAMES [Special War Examination], "Grafton," Sussex Place, Slough, Bucks.
- SUGDEN : HOWARD DAVY [Final Examination], "The Heath," 2 Holford Road, Hampstead, N.W.3.
- SUTHERS : STANLEY HOLT [Special War Examination], 2 Til-more Road, Petersfield, Hants.
- TANNER : CHARLES PUGET [Special War Examination], 110 St. George's Terrace, Newcastle-on-Tyne.
- TAYLOR : WILLIAM LOGAN [Special War Examination], School-house, Kintore, Aberdeenshire.
- TEMPLAR : WILLIAM RICHARD [Special War Examination], 106 Pembroke Road, Seven Kings, Essex.
- TOMS : BERTRAM HENRY [Special War Examination], 72 Orbel Street, S.W.11.
- TOWNDROW : FREDERIC EDWARD [Special War Examination], 37 Fernbank Avenue, Sudbury Hill, South Harrow.
- TROUP : ROBERT JAMIESON, M.A., Croix de Guerre [Special War Examination], 14 Gray's Inn Square, W.C.1.
- VINYCOMB : WILLIAM LIDDLE [Special War Examination], 3 Granville Avenue, Forest Hall, Northumberland.
- WHITTAKER : GEORGE [Special War Examination], 11 London Terrace, Blackburn.
- WILKINSON : HERBERT CUTLER [Special War Examination], 43, Milton Street, Nelson, Lancs.
- WILLMOTT : STANLEY JOHN [Special War Examination], H.M. Office of Woods, etc., 1 Whitehall, S.W.1.
- WILSON : JOHN WILLIAM GILMOUR [Special War Examination], 9 Addison Mansions, Kensington, W.14.
- WISLADE : MORRIS LESTER [Special War Examination], 4 Manor Lane, Lee, S.E.13.
- WYNNE-WILLIAMS : WALTER PHILLIPS [Special War Examination], 107 East Dulwich Grove, S.E.22.
- YATES : CHARLES WILLIAM [Special War Examination], 34 Gayner Road, Filton, Bristol.
- YOUNG : JOHN REEVE [Special War Examination], 4 Grant Road, Wealdstone, Harrow.
- YOXALL : THOMAS [Special War Examination], 8 Church Street, Burslem, Staffs.

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AS HON. ASSOCIATES (2).

HUDSON: EDWARD, 15 Queen Anne's Gate, Westminster, S.W.1.

KEYSER: CHARLES EDWARD, M.A., F.S.A., F.S.A.Scot., F.R.Hist. Soc., F.R.Soc. of Litt., J.P., D.L., President of the British Archaeological Association, Aldermaston Court, near Reading.

AS HON. CORRESPONDING MEMBERS (9).

ARNAUD: EDOUARD, Director of the Teaching of Construction, Ecole des Beaux Arts, 11 Rue de Téhéran, Paris (8e.).

BARBER: DONN, 101 Park Avenue, New York, U.S.A.

EMERSON: PROFESSOR WILLIAM, Director of the Department of Architecture, Massachusetts Institute of Technology, 491 Boylston Street, Boston, Mass., U.S.A.

GOODHUE: BERTRAM GROSVENOR, 2 West Forty-seventh Street, New York, U.S.A.

HASTINGS: THOMAS, Royal Gold Medallist 1922, 52 Vanderbilt Avenue, New York, U.S.A.

HÉBRAUD: ERNEST, Grand Prix de Rome 1904, 23 Rue Jacob, Paris (6e.).

KOCHURE: DR. A., Professor of Architecture at the Tokio University, Japan.

PLATT: CHARLES A., 101 Park Avenue, New York, U.S.A.

STEVENS: GRAHAM, Director of the American School at Rome.

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BOMBAY, BARODA AND CENTRAL INDIA RAILWAY.

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11th October 1922.

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Arrangements have been made for the supply of the R.I.B.A. JOURNAL (post free) to members of the Allied Societies who are not members of the R.I.B.A. at a specially reduced subscription of 12s. a year. Those who wish to take advantage of this arrangement are requested to send their names to the Secretary of the R.I.B.A., 9 Conduit Street, W.1.

Members sending remittances by postal order for subscriptions or Institute publications are warned of the necessity of complying with Post Office Regulations with regard to this method of payment. Postal orders should be made payable to the Secretary R.I.B.A., and crossed.

IAN MACALISTER,
Secretary R.I.B.A.

Members' Column

Members, Licentiates, and Students may insert announcements and make known their requirements in this column without charge. Communications must be addressed to the Editor, and be accompanied by the full name and address. Where anonymity is desired, box numbers will be given and answers forwarded.

CHANGE OF ADDRESS.

MR. THEODORE FYFE took up the Mastership of the Cambridge University School of Architecture on 10th October. His business address in future will be "The University School of Architecture, 73 Trumpington Street, Cambridge." Telephone: Cambridge 217.

MR. WILFRID TRAVERS, O.B.E., F.R.I.B.A., has moved his office from 8 Bedford Row, W.C.1, to 1 Featherstone Buildings, Holborn, W.C.1. (Telephone: Chancery 7932).

MR. W. A. COLE ADAMS is now practising at Totland Bay, Isle of Wight, and would be glad to act in conjunction with London architects who may have large or small works in or around this district or in Bournemouth and the New Forest.

MESSRS. PERCY TUBBS, SON & DUNCAN.

MR. PERCY TUBBS has taken into partnership his son, Mr. Grahame Burnell Tubbs [A.] and Mr. R. A. Duncan [A.]. The firm will in future be known as Messrs. Percy Tubbs, Son & Duncan, and will practise Architecture and Surveying at 10 Gray's Inn Square, W.C.1.

MR. J. HUGH GOODMAN.

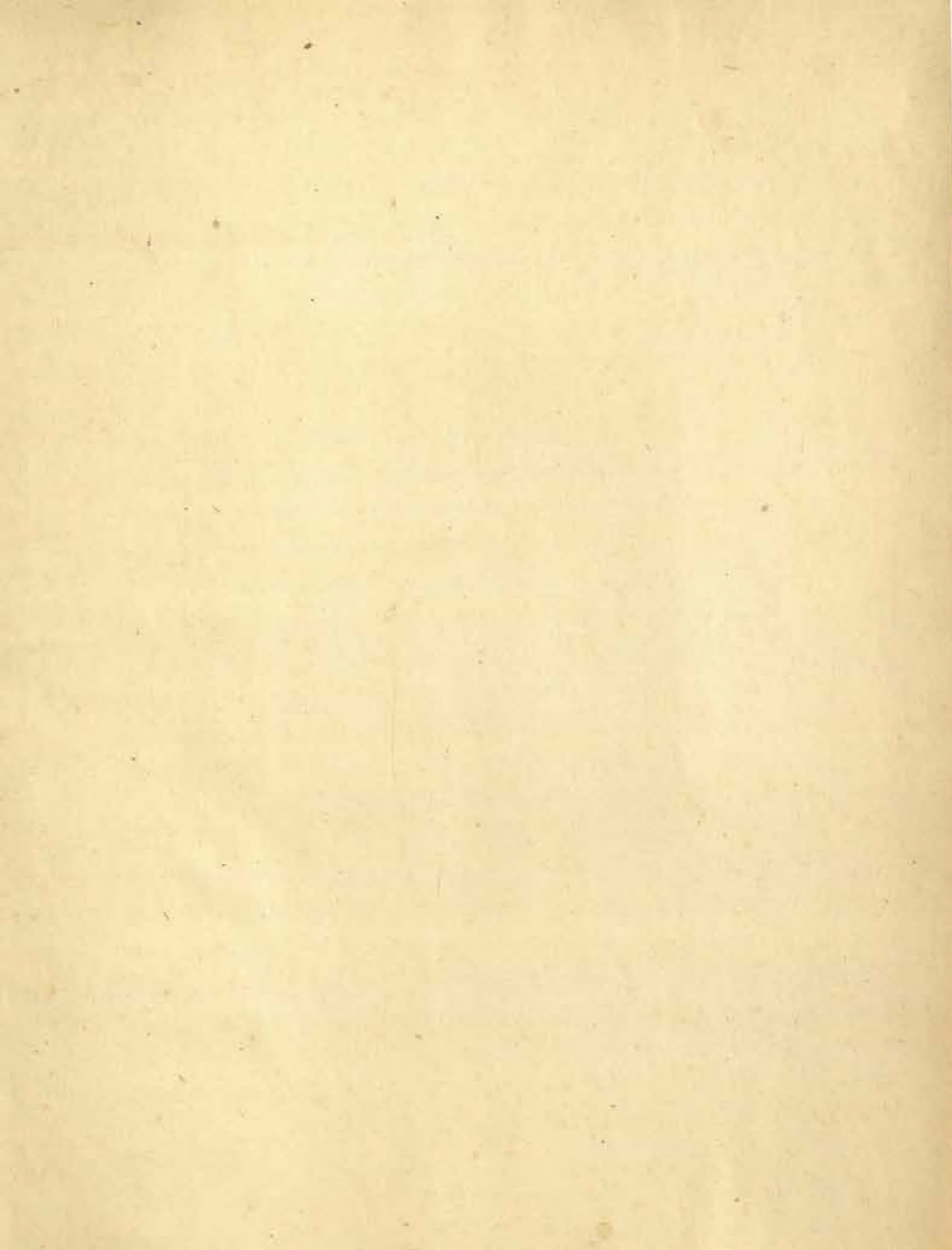
MR. J. HUGH GOODMAN (Lic. R.I.B.A.) has been appointed a Diocesan Surveyor for the Archdeaconry of Berkshire in succession to the late Mr. S. Slingsby Stallwood, F.S.A.

SCOTLAND.

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